MULTIPOINT USB OVER LAN Workstation MWS9940

MWS9940 USER MANUAL

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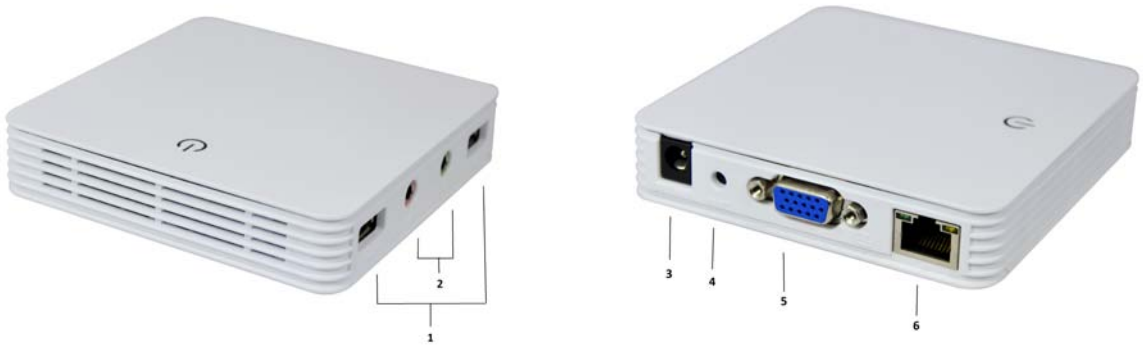
INTRODUCTION



1. Two High-Speed USB Ports
2. Audio and Microphone Ports
3. AC Power Jack
4. Reset Port
5. VGA Port
6. Giga LAN Port

PACKAGE CONTENTS

- MWS9940
- VESA MOUTING KITS
- LAN CABLE
- 3A/5V AC POWER ADAPTER
- DRIVER CD
- UER MANUAL

MCT's Multipoint USB over LAN WorkStation MWS9940 leverage new Microsoft Windows Server 2011 technology, providing Plug-and-Play USB and GIGA-LAN Solution that transforms single computers into Multiuser Workstation, and turn it into a distance free Zero Client device.

MWS9940 powers MultiPoint Workstation 2011 system in full features allowing one computer to server up to 10 workstations (Figure 1) without adding 2nd system or any excess graphic card, great for cost saving!

MWS9940 simply connect it to Gigabit Ethernet Port on the server and attach a monitor, keyboard, and mouse to add a new workstation. The MWS9940
features two high-speed USB 2.0 ports, audio and microphone ports, a VGA port that supports resolutions up to 1600 x 1200

The MWS9940 provides an inexpensive and reliable way to expand your Windows MultiPoint Server 2011 for school and office running "office application"
"Home Entertainment" and "Full Screen Movie Playback" are not recommended.

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MINIMUM SYSTEM REQUIREMENTS

- Available Gigabit Ethernet port or Gigabit Ethernet extension card.
- CPU **–** One of the following:

  x64-based Intel Pentium, Intel quad core (i7, i5).
- Compatible processor (MultiPoint Server supports up to four core & eight core CPUs on one server)

Note:

1) AMD Opteron / Athlon, AMD Embed chipset is not recommend due to unstable keyboard/mouse operation which may not recognize under USB1.1 device.

2) Intel Itanium Processor is not supported.

- RAM **–** The required RAM depends on the number of MultiPoint USB OVEN LAN Workstation MWS9940s that are connected to the computer:
  - DRAM 2GB for 4 stations
  - DRAM 4GB for 6 stations
  - DRAM 8GB for 10 stations

- **Multi-core processor support**
  - Support up to 4 & 8 multi-core processors; dual-core is less powered and therefore only 2 to 3 workstation can be supported.
- **Minimum disk space for setup**
  - 32 GB

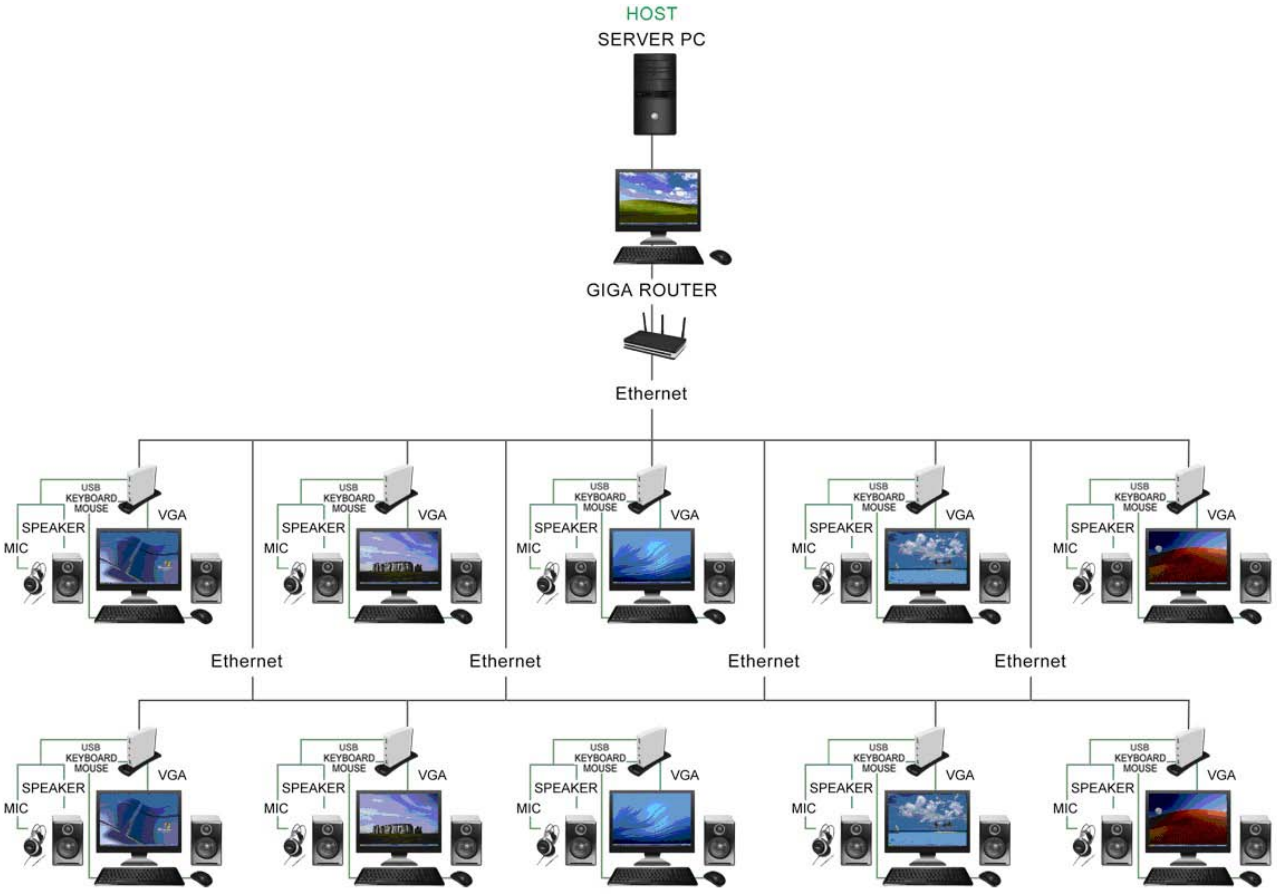


Figure 1 10-Seat Implementation of Windows MultiPoint Server2011 with using MWS9940

FEATURES

- Ethernet connection the host server with distance free
- Simple plug and play setup
- Eliminates the need for internal video card installation
- Designed for Microsoft Windows MultiPoint Server 2011
- Simplified administration
- Up to 10 WorkStations per Server PC
- Average of 95% power reduction compared to a conventional PC
- Ideal for education, call centers, computer labs and home offices as well as SMB and government

CONNECTIONS AND MOUNTING KITS

- Power jack – 5V/3A DC in
- Reset Function port (Recall Firmware Default)
- 1 VGA Port (Resolutions up to 1600 x 1200 (1600 x 900 system recommend)
- 1 Gigabit Ethernet Port
- Stereo Audio Output (Speaker/Headphone) and Mono audio input (Mic)
- 2 USB 2.0 Ports for Keyboard and Mouse / Plug-and-Play compliant

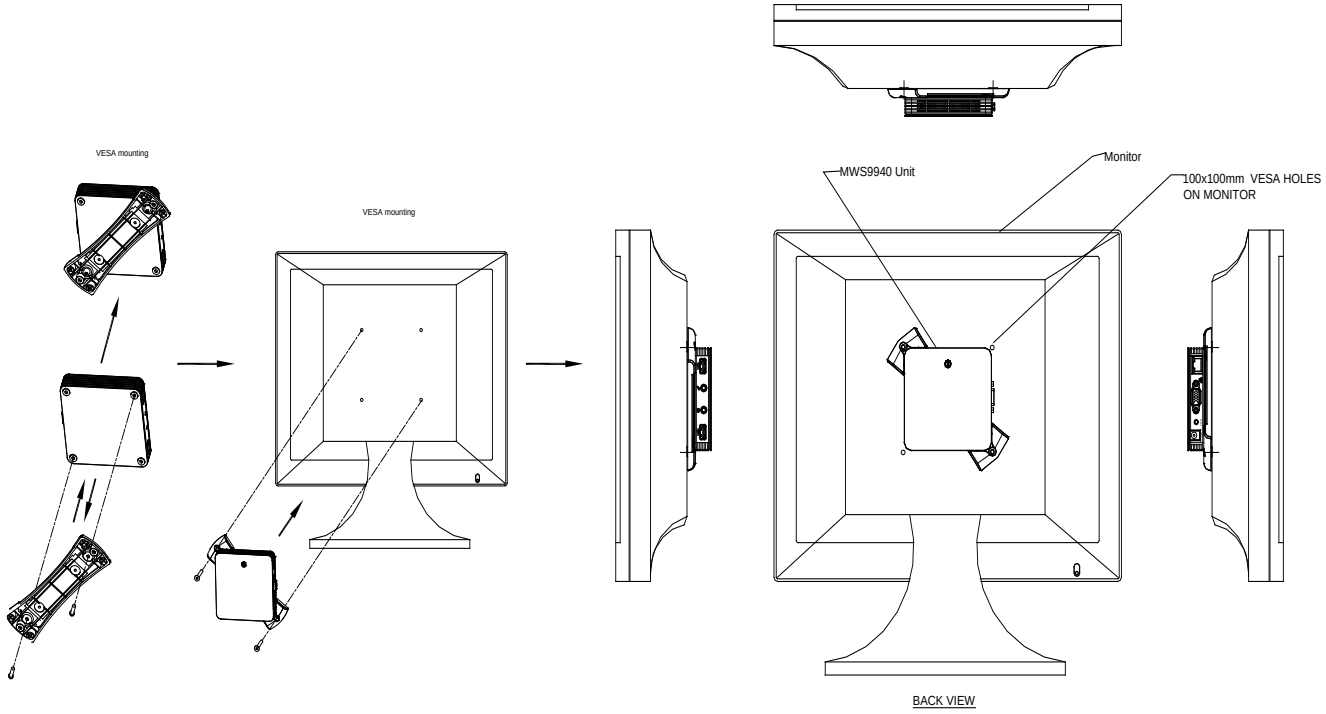
Optional usage for USB connection:
Select one USB port for Wireless Keyboard and mouse, therefore,
The second USB connector can be used for flash drive or External USB Storage

CONNECTIONS

OPTIONAL USB CONNECTIONS

VESA MOUNTS

Follow up the picture illustration below:



OPERATING SYSTEMS SUPPORTED

For optimal multimedia performance, we recommend the following CPUs:

- Dual-core processor: support up to 3 stations under low processing application.
- Quad-core processor: support up to 6 stations under low processing application.
- Core-i5 processor: support up to 6 stations under low processing application.
- Core-i7 processor: support up to 6 or 10 stations under low processing application.
- Windows MultiPoint Server 2011

FOR OPTIMUM VIDEO DISPLAY

Full screen video display is not recommended, user may try one station for full screen video play back under 720P periodically. a higher system may required for full screen video play back, please refer to following specification:

- i7 processor
- Intel Sandy bridge chipset

Note: Extended video display at full screen is not recommended; it often exhausts CPU and force system with much lower performance.

REGULATORY COMPLIANCE

FCC / CE / C-tick / VCCI

Tested to comply with FCC Standards.

PACKAGE CONTENTS

• MW9940
• Mounting kits
• Ethernet Cable
• 3A/5V AC Power Adapter
• CD (Driver and User's Manual)
• Quick Install Guide

SUPPORTED DISPLAY RESOLUTIONS

1600 x 1200
1600 x 900
1440 x 900
1400 x 1050
1360 x 768
1280 x 1024
1280 x 960
1280 x 800
1280 x 768
1280 x 720
1152 x 864
1024 x 768
800 x 600

NOTE

Always prepare devices as how many stations as the user plan to build up. Then classify into the Mac addresses for different servers. In order to better organize for different locations, the table as below is strongly recommended to use for pasting the Mac address while in the build-up process. This is also as a reference for users so as to move or add additional WorkStation if needed

.

SERVER A

No.	MWS9940 MAC address	Remark

SERVER B

No.	MWS9940 MAC address	Remark

Table 1

SERVER C

No.	MWS9940 MAC address	Remark

SERVER D

No.	MWS9940 MAC address	Remark

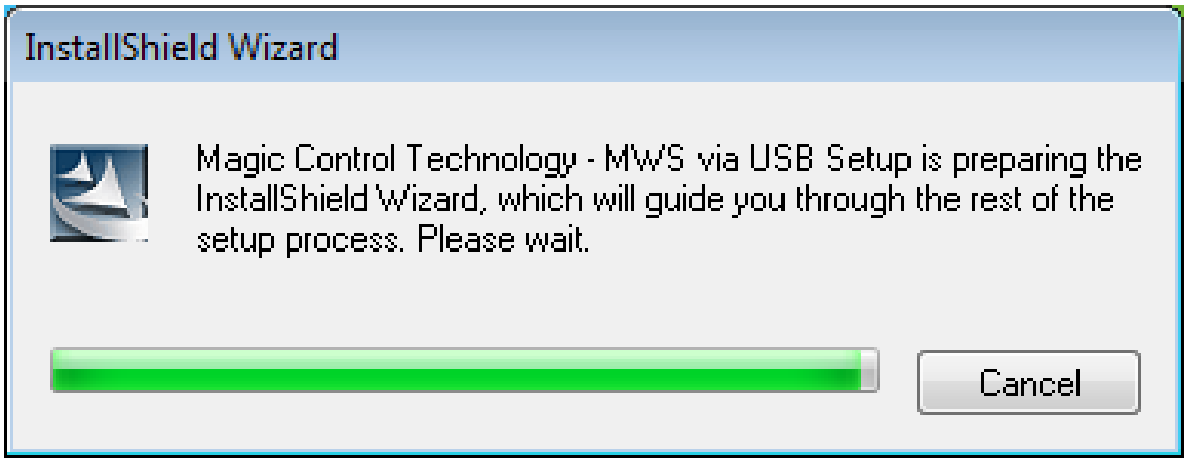
Table 2

DEVICE INSTALLATION - SOFTWARE

Installing the device driver enables Windows MutliPoint Server 2011 to recognize the MWS300UV2. Please make sure the MWS300UV2 is unplugged from your server before executing the setup program.

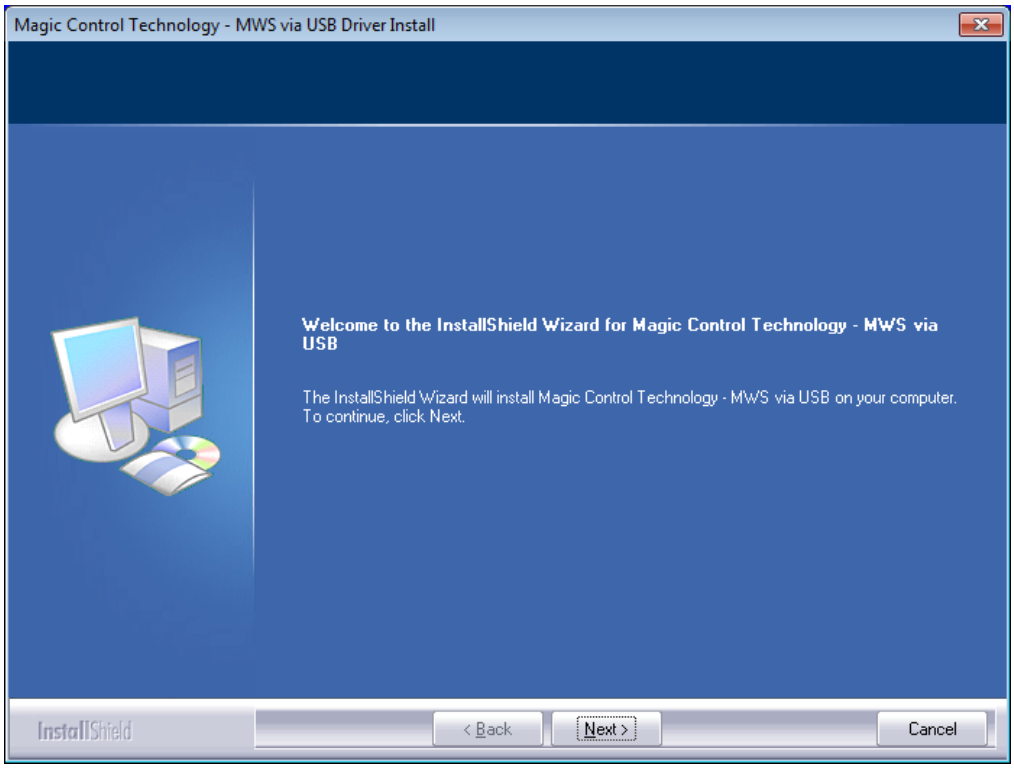
Step 1

Insert the Driver installation CD into the CD-ROM drive. The installer should start automatically. If it does not, double click **Setup.exe** to start the Installation Wizard.


InstallShield Wizard
Magic Control Technology - MWS via USB Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
Cancel

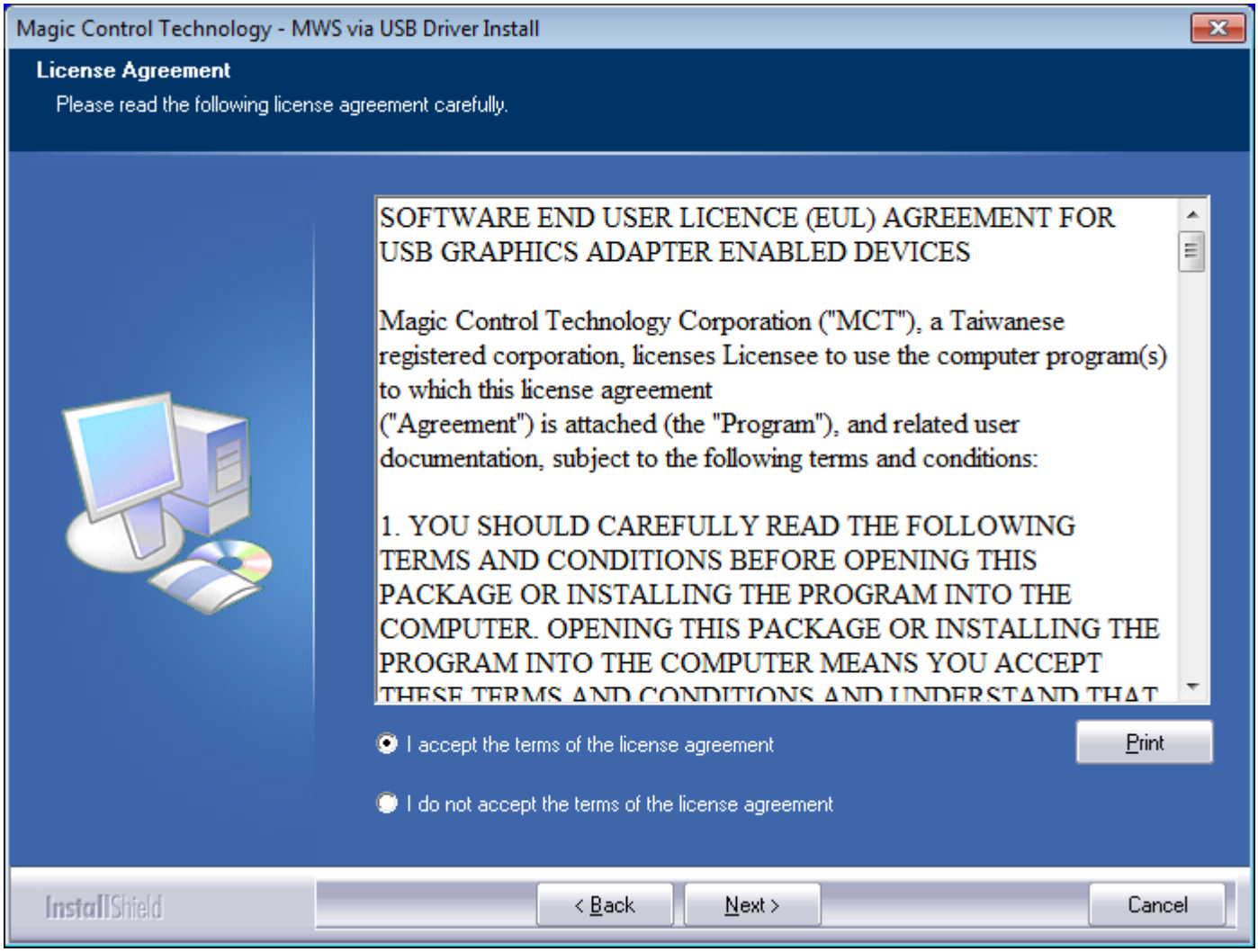
Step 2

Driver Installation Wizard, click **Next** to continue


Magic Control Technology - MWS via USB Driver Install
Welcome to the InstallShield Wizard for Magic Control Technology - MWS via USB
The InstallShield Wizard will install Magic Control Technology - MWS via USB on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

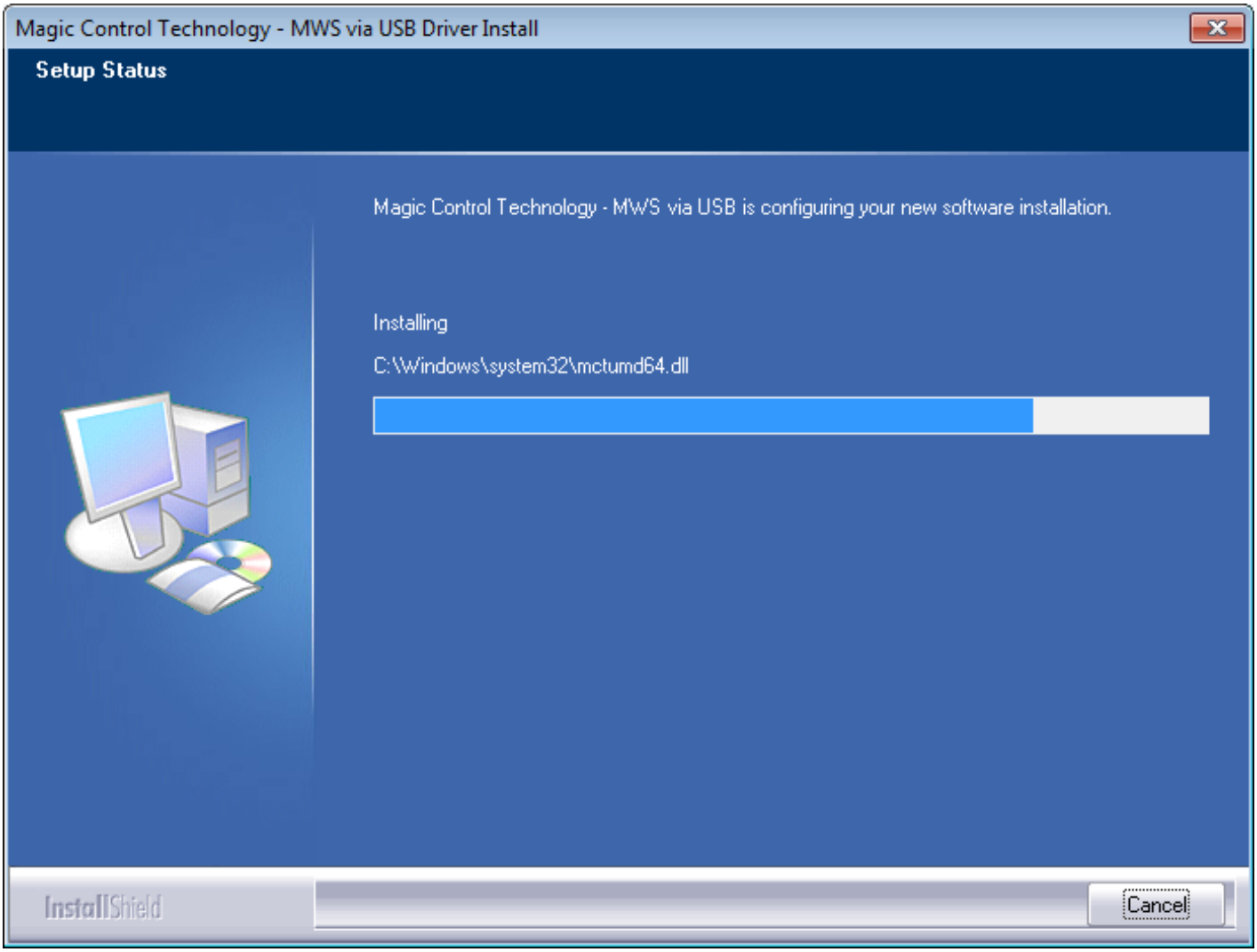
Step 3

License Agreement; review it and check **I accept the terms of the license agreement** Click **Next** to accept the License Agreement.


Magic Control Technology - MWS via USB Driver Install
License Agreement
Please read the following license agreement carefully.
SOFTWARE END USER LICENCE (EUL) AGREEMENT FOR USB GRAPHICS ADAPTER ENABLED DEVICES
Magic Control Technology Corporation ("MCT"), a Taiwanese registered corporation, licenses Licensee to use the computer program(s) to which this license agreement ("Agreement") is attached (the "Program"), and related user documentation, subject to the following terms and conditions:
1. YOU SHOULD CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS BEFORE OPENING THIS PACKAGE OR INSTALLING THE PROGRAM INTO THE COMPUTER. OPENING THIS PACKAGE OR INSTALLING THE PROGRAM INTO THE COMPUTER MEANS YOU ACCEPT
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

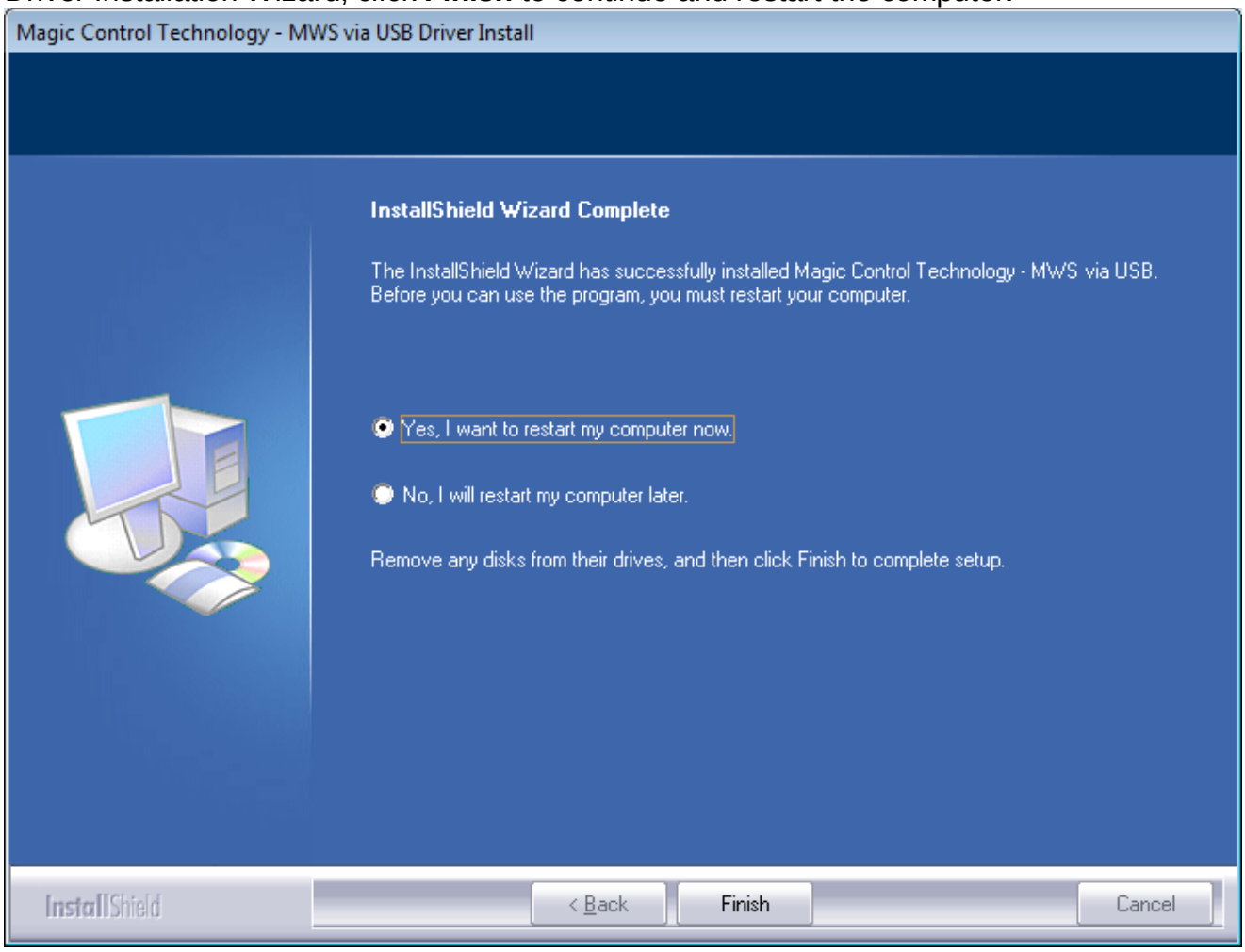
Step 4

Setup is searching for installed features... *You may notice the screen flashes during hardware installation. It is part of the normal process. .


Magic Control Technology - MWS via USB Driver Install
Setup Status
Magic Control Technology - MWS via USB is configuring your new software installation.
Installing
C:\Windows\system32\mctumd64.dll
InstallShield
Cancel

Step 5

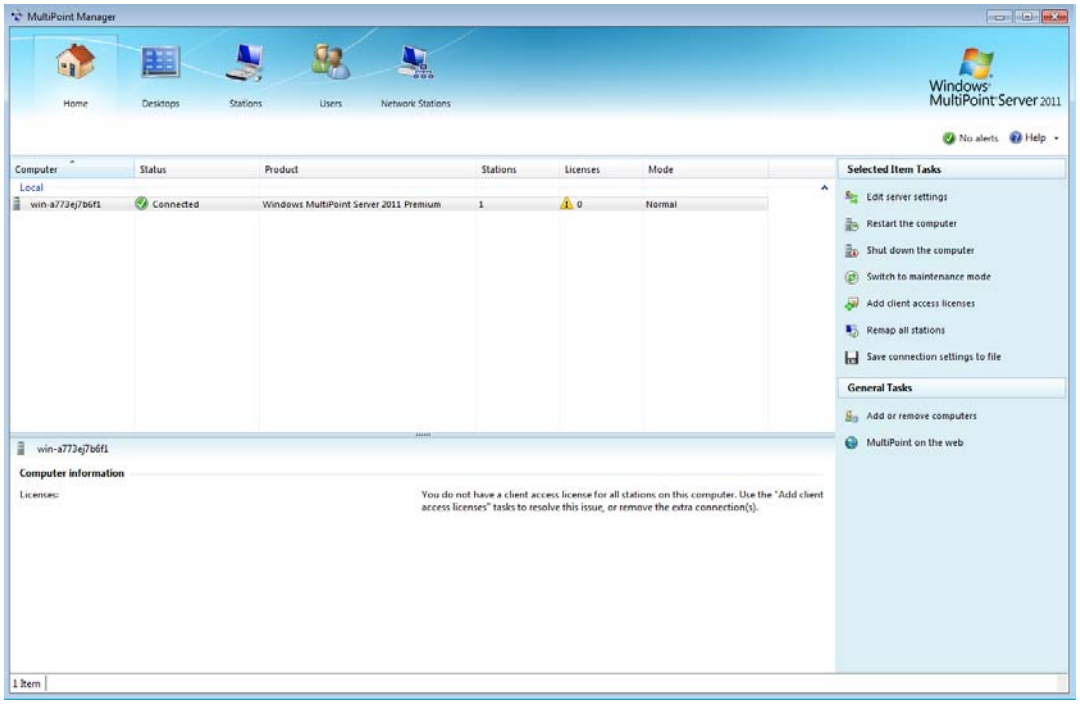
Driver Installation Wizard, click **Finish** to continue and restart the computer.


Magic Control Technology - MWS via USB Driver Install
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed Magic Control Technology - MWS via USB. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
InstallShield
< Back
Finish
Cancel

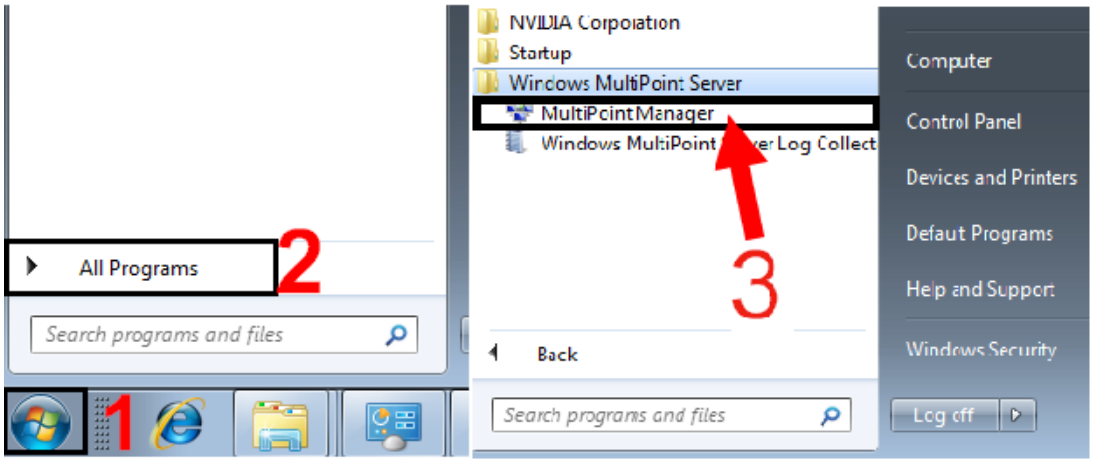
THE STATIONS ASSIGNMENT

BUILDING WORKSTATION ON SINGLE SERVER ONLY

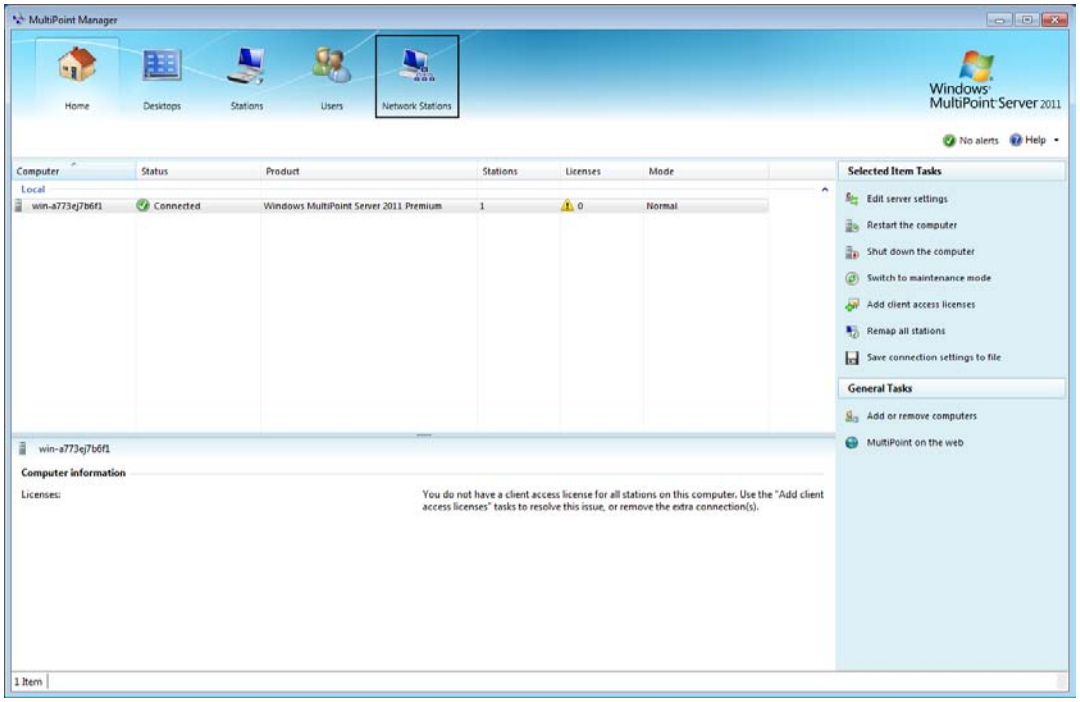
Step 1
The “MultiPoint Manager” page will be auto-displayed in a minute after system boot-up and administrator log-in.



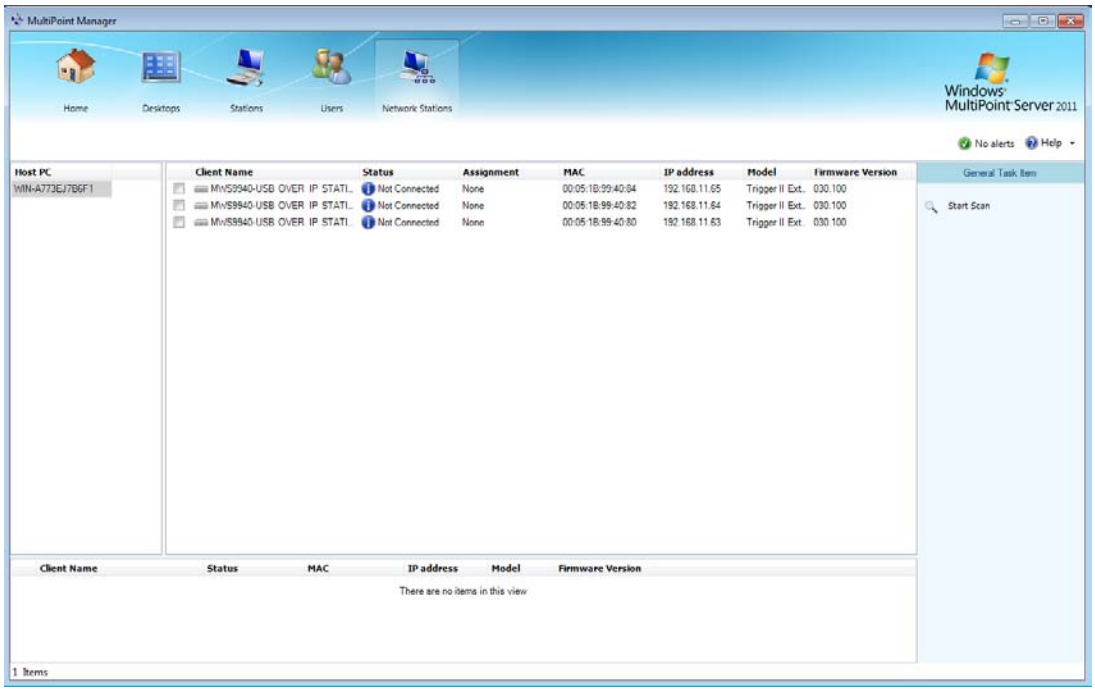
NOTE: If this page did not pop out automatically, please follow the illustrate below: 1. Start -> 2. All Programs -> 3. MultiPoint Manager



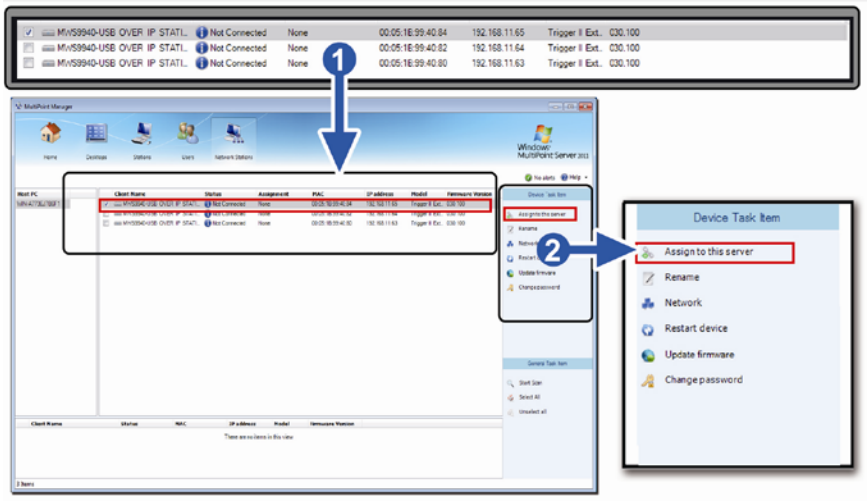
Step 2
Click “Network Stations**”** as showed:



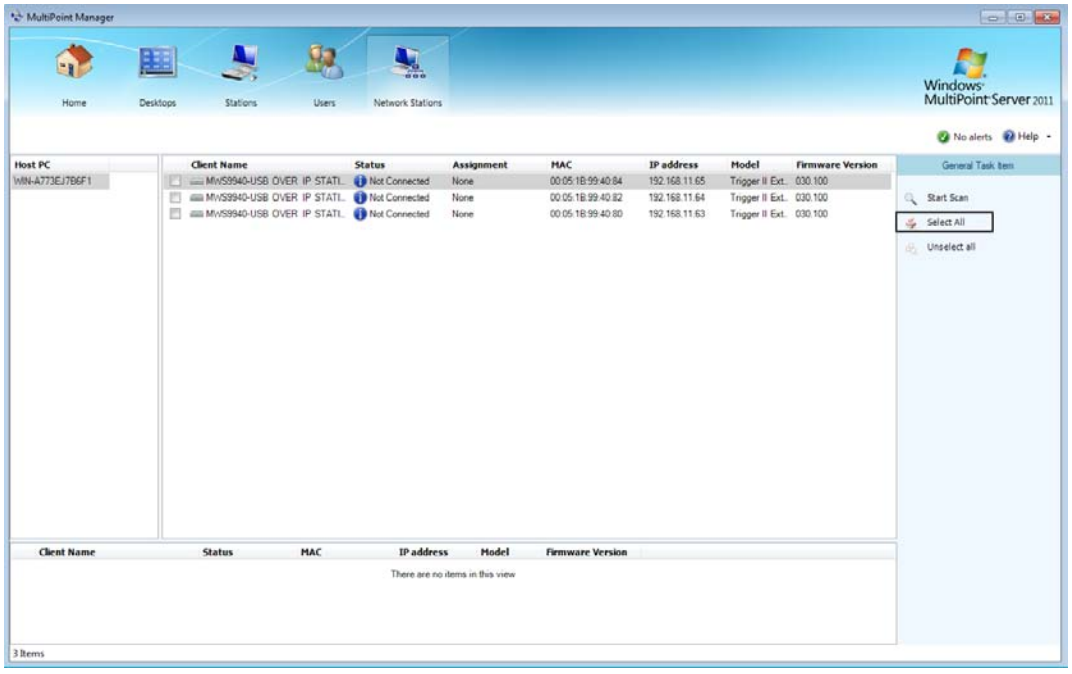
Step 2-1
When there is 3 workstation HUB is connected,
It shows 3 stations on the screen which are free / waiting for assignment inside the “status” column indicating as “not connected”.

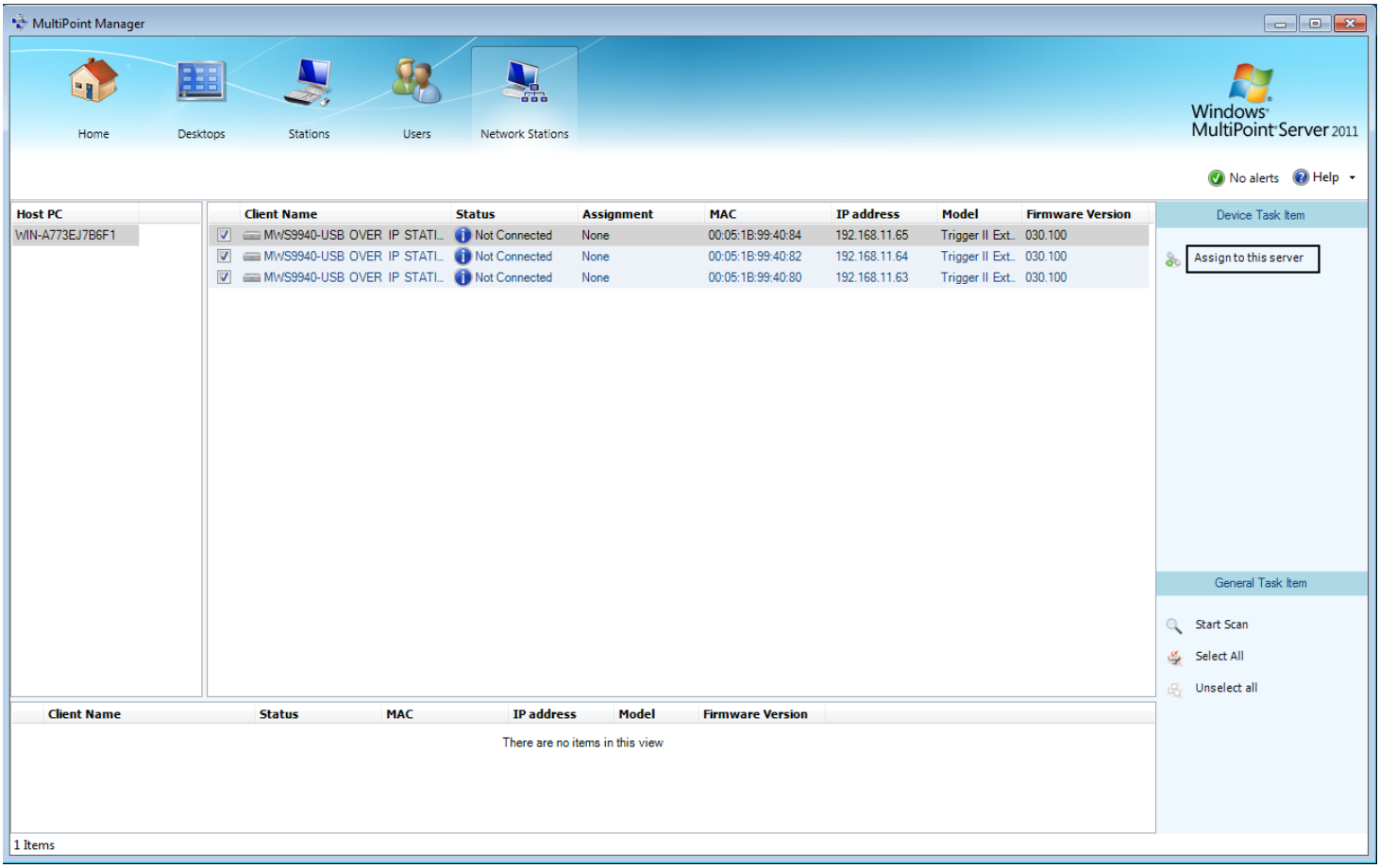


Step 3
Click the block "☐" to select one of the stations under the column on the left side of the "client Name" and then click "Assign to this server" at the right column as illustrated.

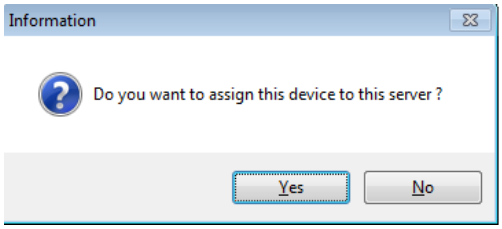


Step 3-1
If all of the stations need to be selected, simply click "Select All" at the right column under "Device Task Item". After that, you will find all of the stations are selected as the blocks "☐". Then, click "Assign to this server".

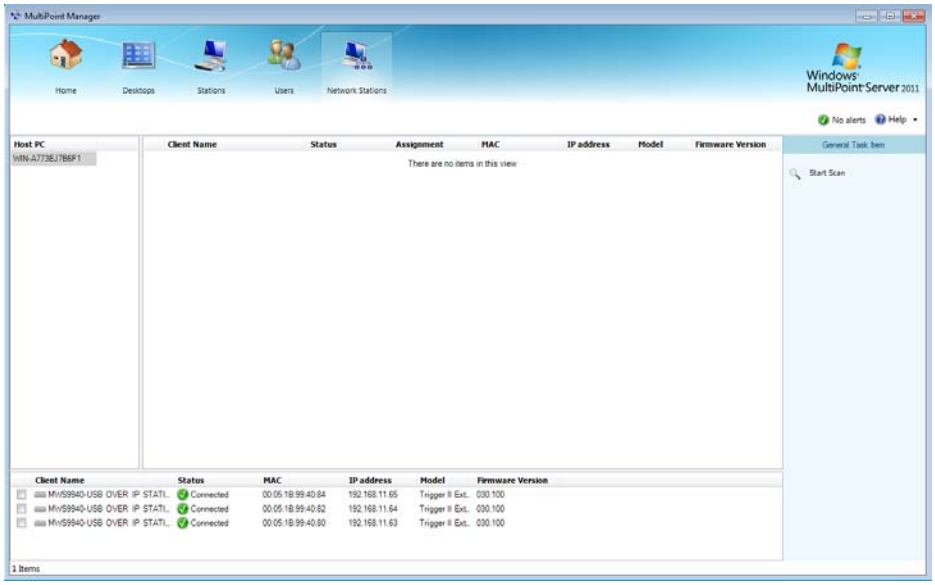



MultiPoint Manager
Home
Desktops
Stations
Users
Network Stations
Windows MultiPoint Server 2011
No alerts
Help
Host PC
WIN-A773EJ7B6F1
Client Name
Status
Assignment
MAC
IP address
Model
Firmware Version
MWS9940-USB OVER IP STATI...
Not Connected
None
00:05:1B:99:40:84
192.168.11.65
Trigger II Ext..
030.100
MWS9940-USB OVER IP STATI...
Not Connected
None
00:05:1B:99:40:82
192.168.11.64
Trigger II Ext..
030.100
MWS9940-USB OVER IP STATI...
Not Connected
None
00:05:1B:99:40:80
192.168.11.63
Trigger II Ext..
030.100
Device Task Item
Assign to this server
General Task Item
Start Scan
Select All
Unselect all
Client Name
Status
MAC
IP address
Model
Firmware Version
There are no items in this view
1 Items

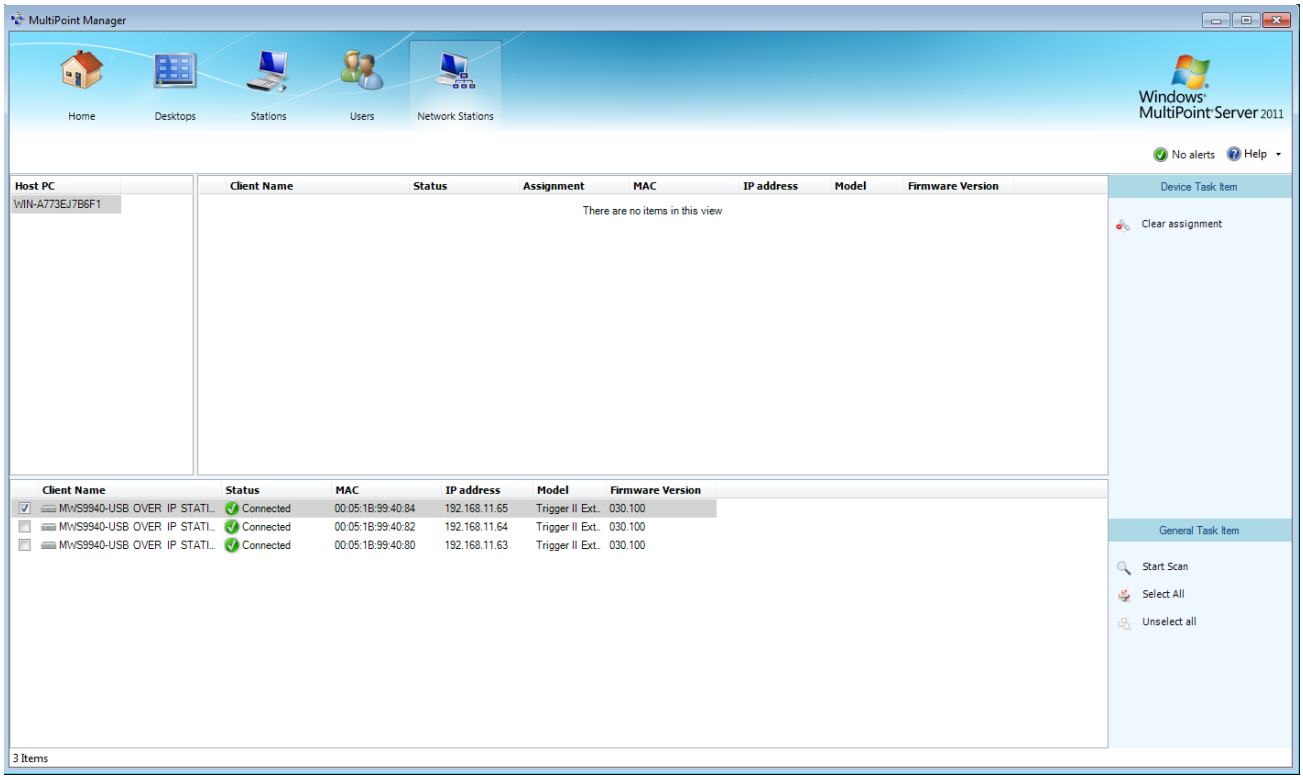
Step 4
Click “Yes” to complete the station assignment.
Repeat the same process of step3 – 4 for the any
other one of the station you desire to select for station assignment.



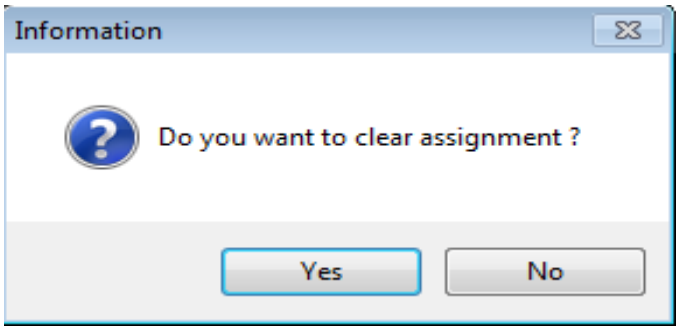
Step 5
The status column will show “Connected” workstation at lower section of the screen.



NOTE: If any one of the stations needs to be disconnected, please select the station and Click “Clear Assignment” under “Device Task Item” on the right panel of the screen then click “Yes” while the dialog pop up for disconnection.



If all of the stations need to be disconnected, simply click “Select All” at the right column under “General Task Item”. After that, you will find all of the stations are selected as the blocks “☐” and click “Clear Assignment” then click “Yes” while the dialog pop up for disconnection.

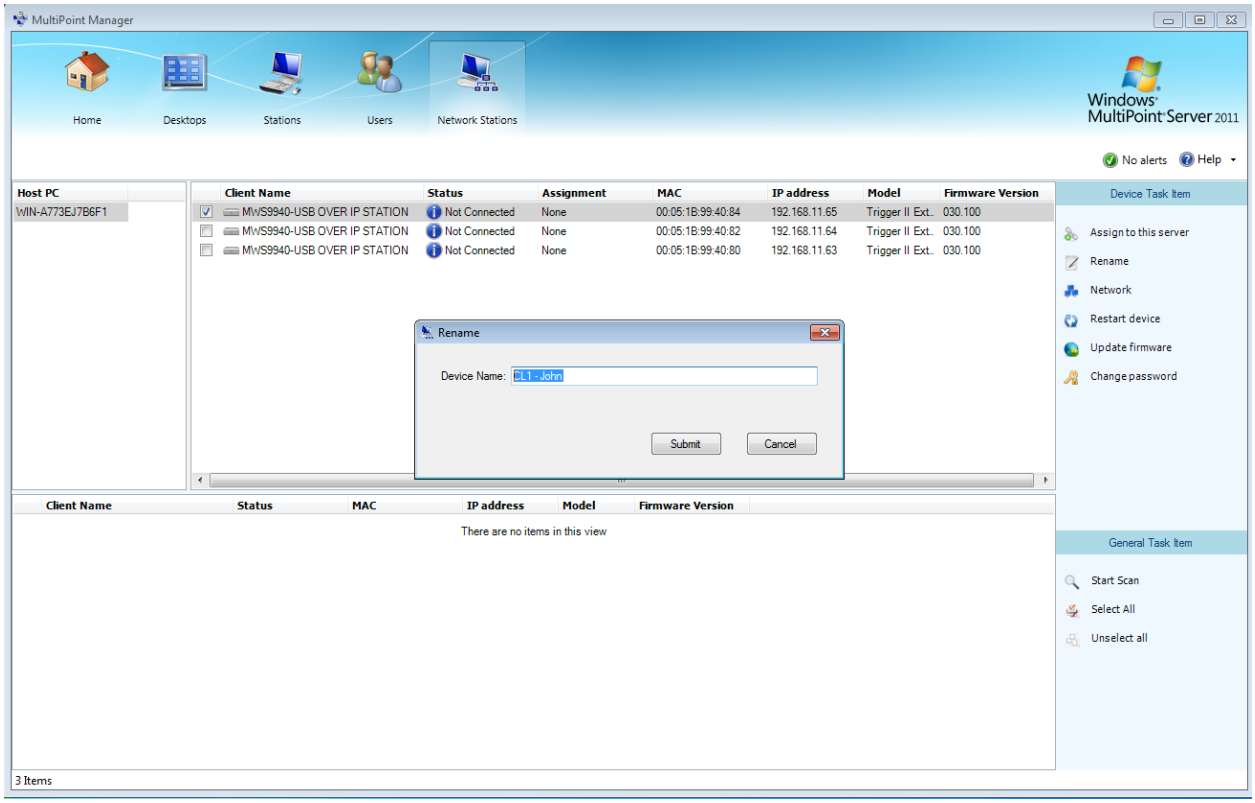


STATIONS RENAME

Renaming the station may convenient administrator recognizing MAC address location by his own design, it needs to be done before station gets assignment.

Rename step:

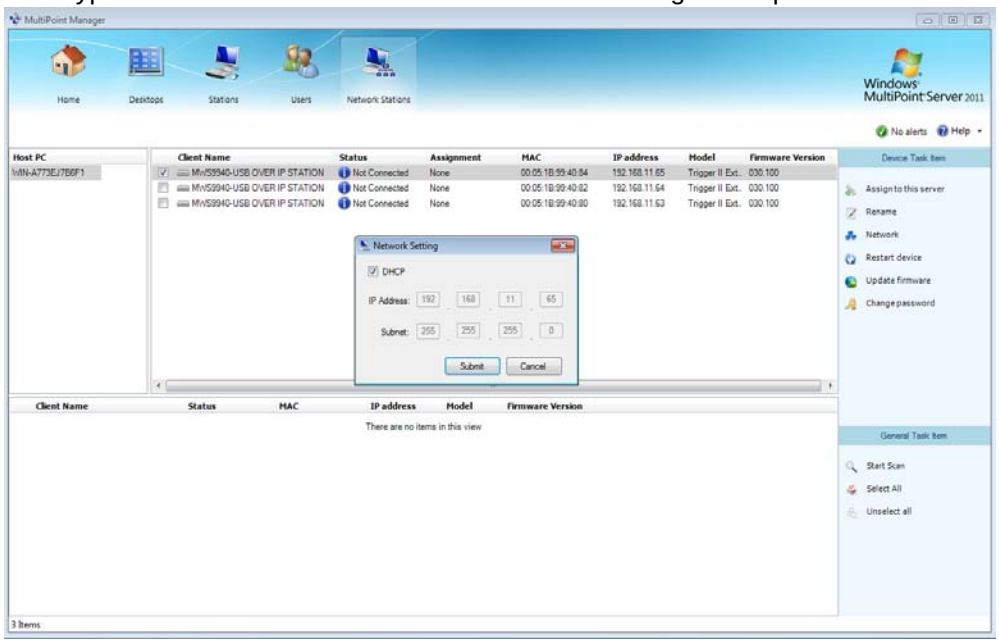
1. Select station by one left click
2. Left click on “Rename” at right panel
3. Rename dialog will pop up then typing desire name (e.g. CL1-John, CL2-Josh)
4. Click “Submit” to complete



NETWORK SETTING

A Local Area Network setting to be prioritize either by Static IP or Dynamic IP for this Server, this Network Setting needs to be done before station gets assigned. "Dynamic IP" is recommend with Router Device:

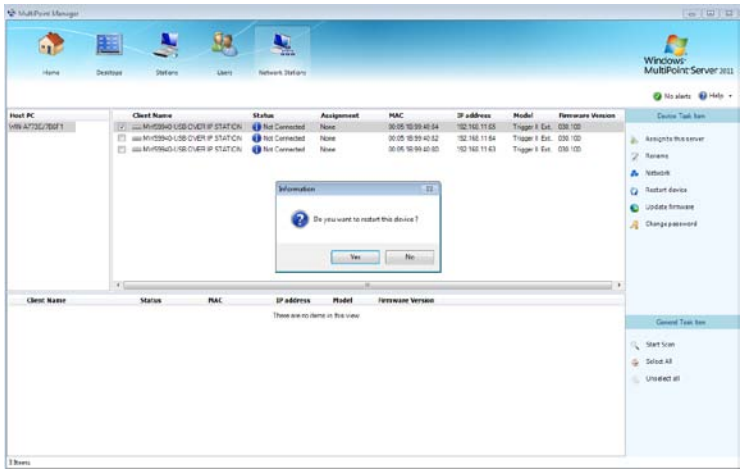
1. Select station by one left click highlight
2. Left click on "Network" under "Device Task Item"
3. Network setting dialog will pop out then left click the DHCP for auto distributing the IP address or manually type the IP address then click "Submit" on the dialog to complete.



RESTART DEVICE

Restart Device function can be use when there are some station did not recognize keyboard/mouse. "Restart device" needs to be done before station gets assignment. Restart device step:

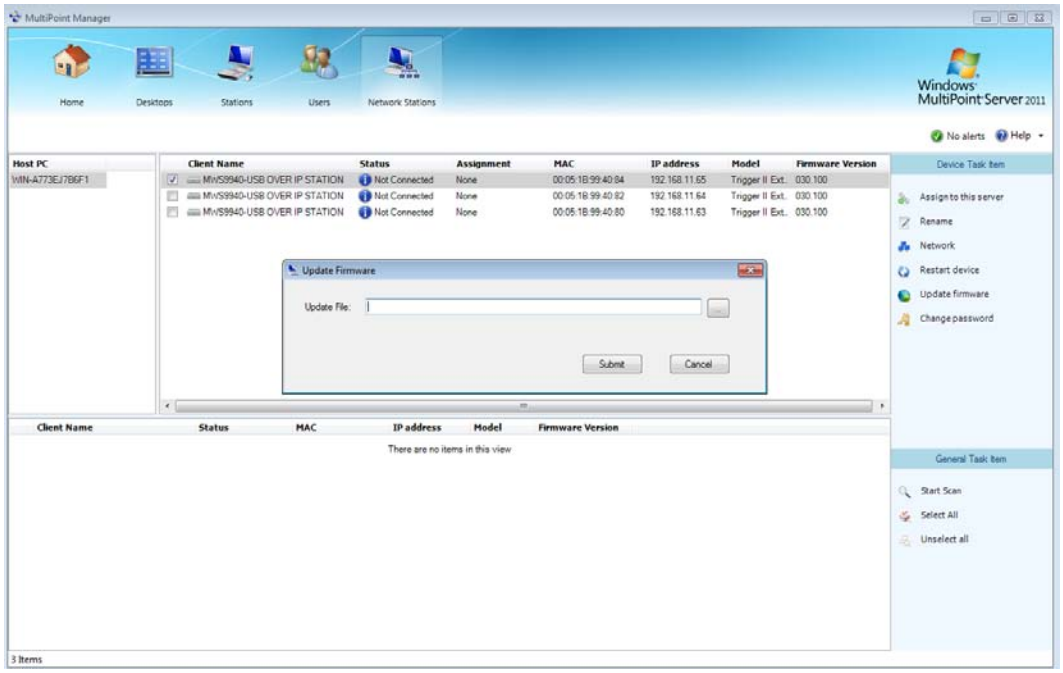
1. Select station by one left click highlighting
2. Left click on "Restart device" under "Device Task Item."
3. Click "Yes" on the dialog to complete



UPDATE FIRMWARE

Station “Update firmware” needs to be done before station gets assignment. Restart device step:

1. Select station by one left click highlighting
2. Left click on “Update firmware” under “Device Task Item”
3. Select the firmware file then click “Submit” to complete.



NOTE: Please contact with the distributor where you bought the device for firmware upgrade.

QUICK SET WORKSTATIONS

Under Local Area Network environment, multiple server may often exist and required to be use, each server linked with a group of workstation and all workstation (MAC address) may appear on every server's system manager, therefore administrator needs to clarify which workstation linked with particular server by keeping each MAC address in handbook and able to rename it.
Please refer to the Figure 1 as an example for deploying 5 stations onto 2 Server (Server A and Server B).

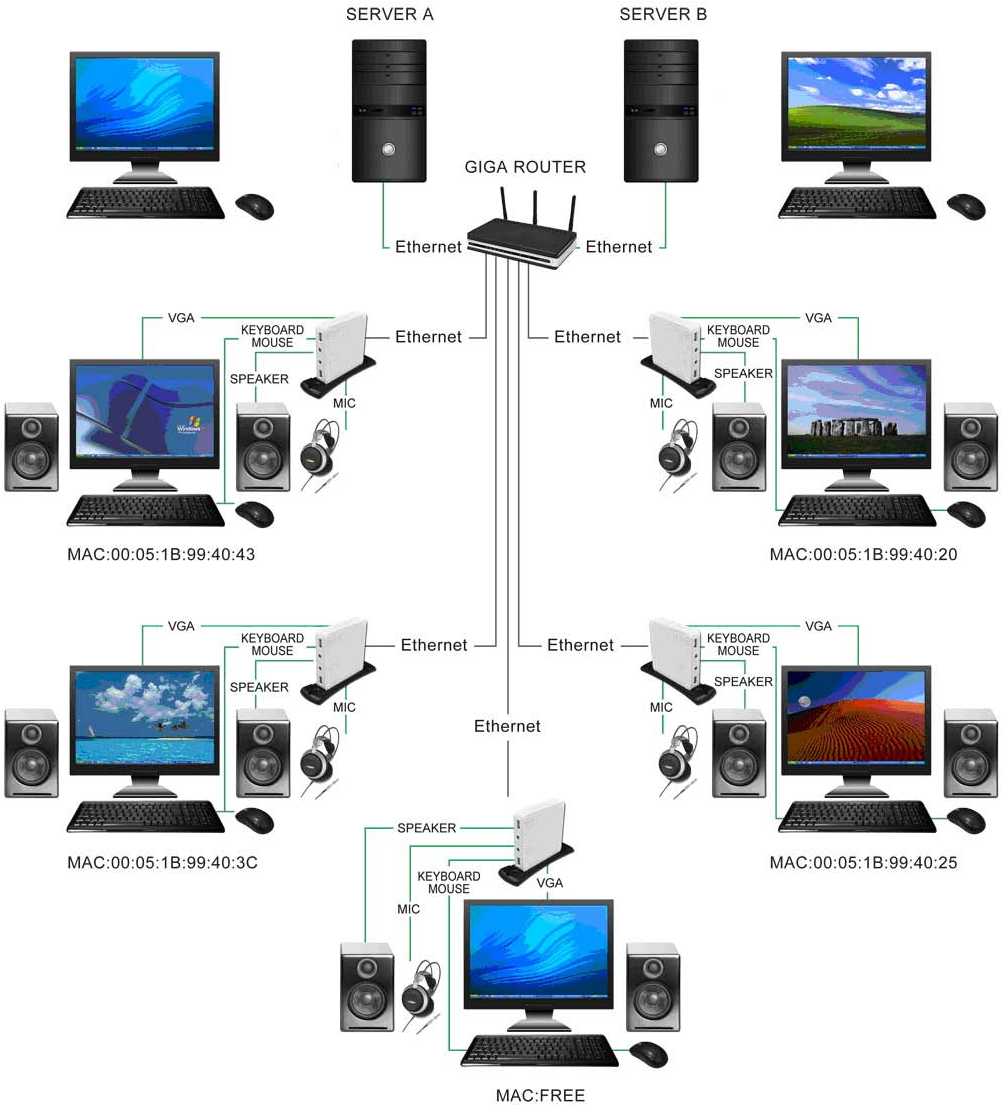


Figure 1

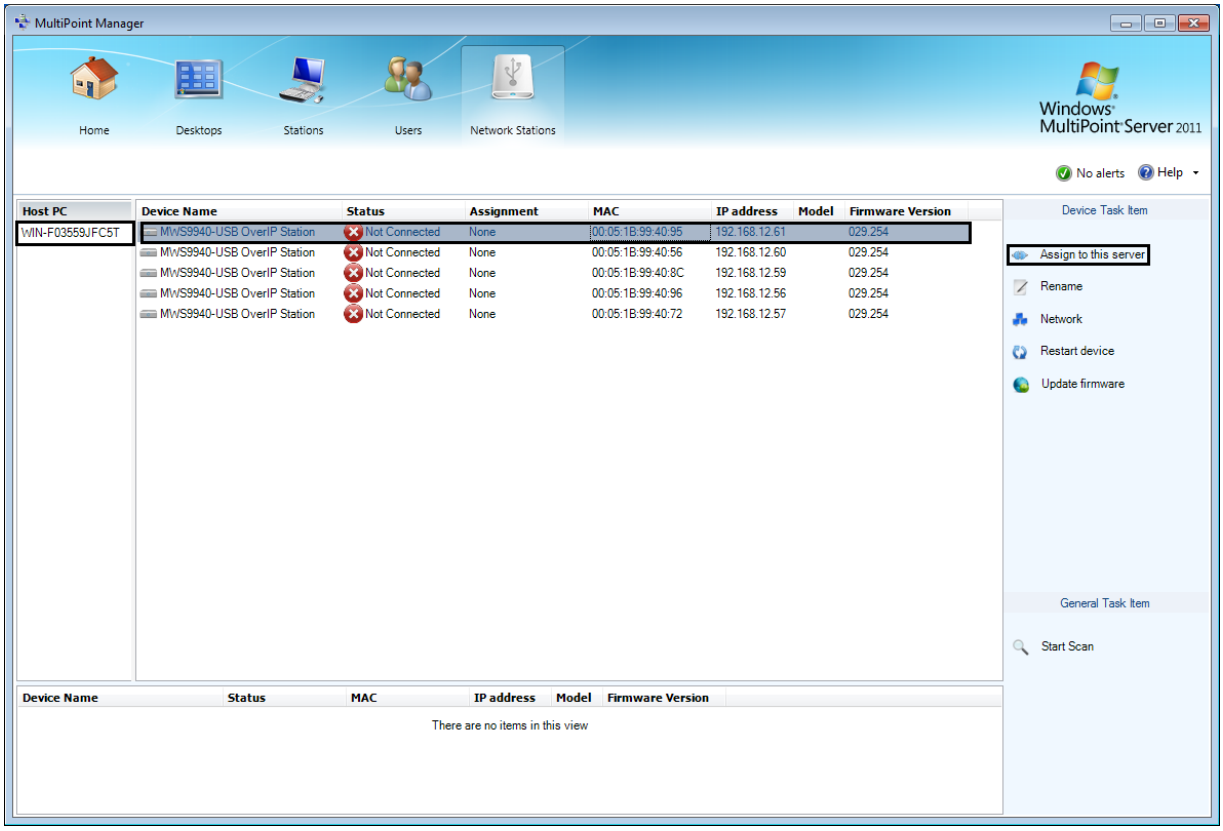
Label the MAC address into the table 1 or 2 before setting up the station as the picture shown below.

Always follow up the discription of point 1 (MAC ADDRESS REMARKING) before setting up the stations)

Step 1 - Label remarking MAC address and save for records. Label the MAC addresses onto the table 1 for Server A and Server B -Grouping Server 'A' devices (MWS9940) and peel the Mac address labels from the back side of the HUB device. Then paste it on the Server 'A' page of the Handbook "Table 1" as provided in the QIG.

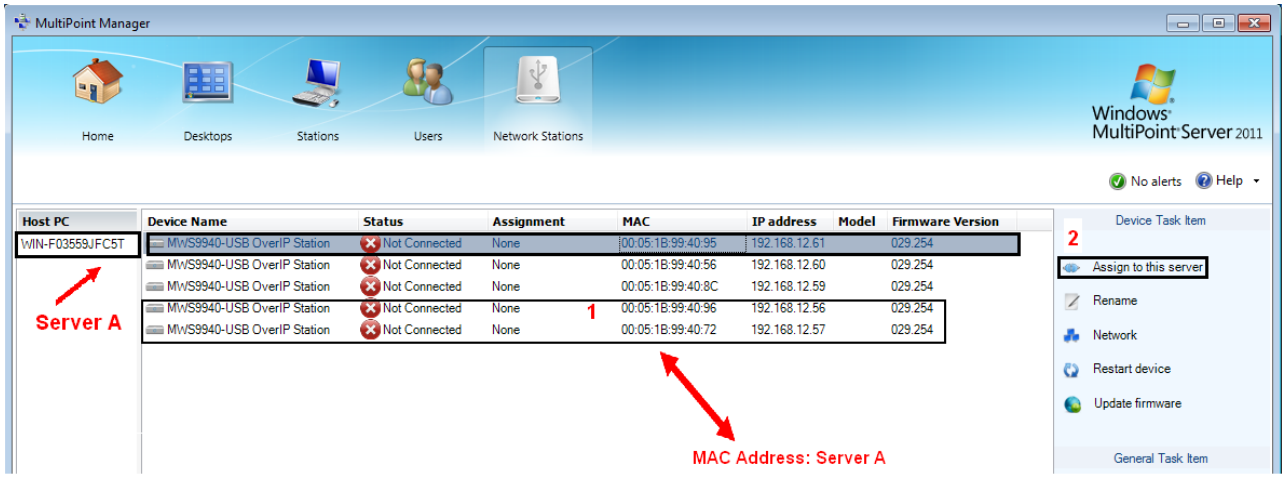
Step 2

Boot the server 'A' after connecting all the stations over Gigabit switch hub. It shows 5 stations on the screen which are free for assignment as well as the "status" column indicate with the message "not connected".

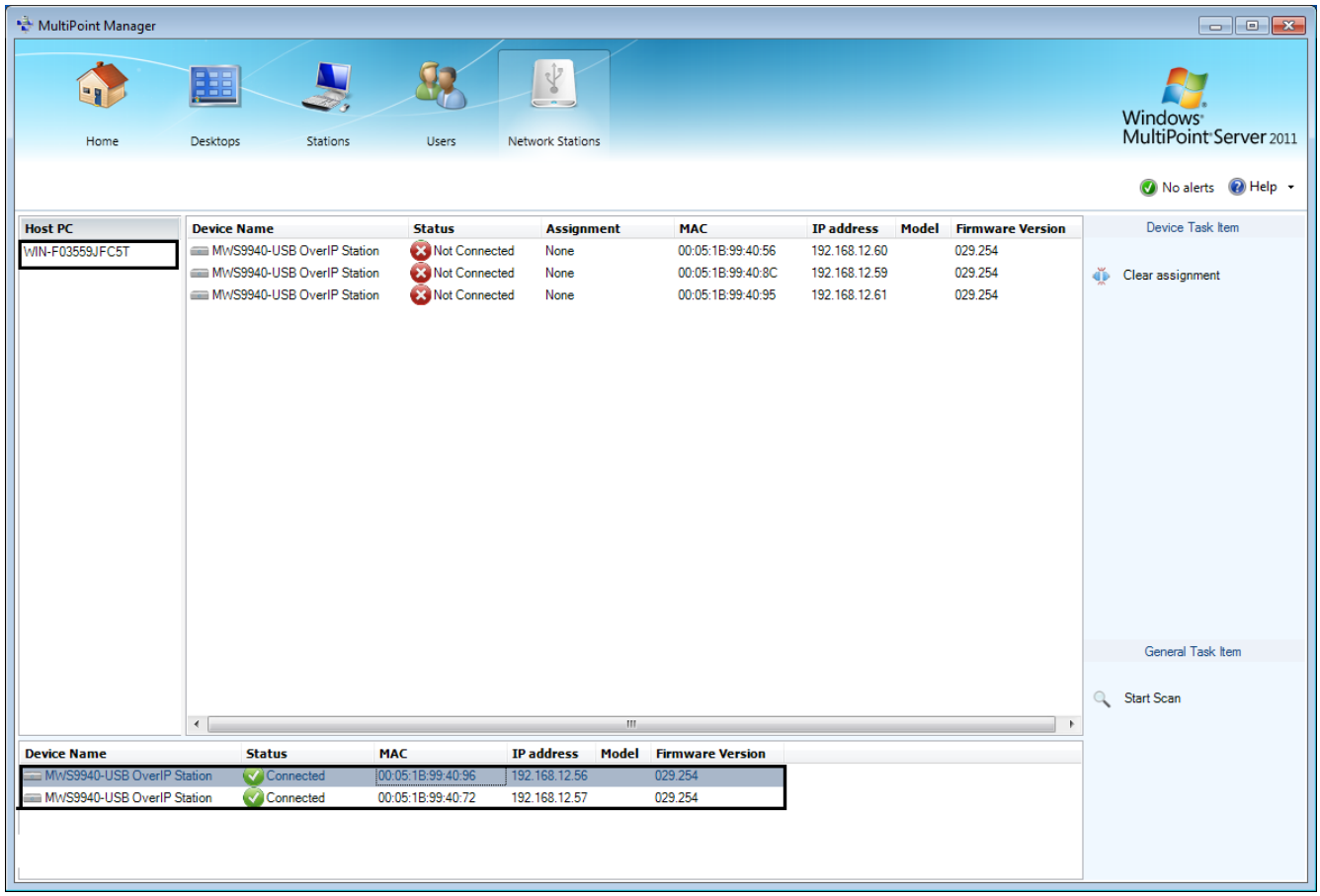


Step 2-1

Select and matching the stations one by one as assigned and pasted on the Server 'A' Column of the table 1 in step 1. Then left click "Assign to this server "under "Device Task Item" to complete assignment.

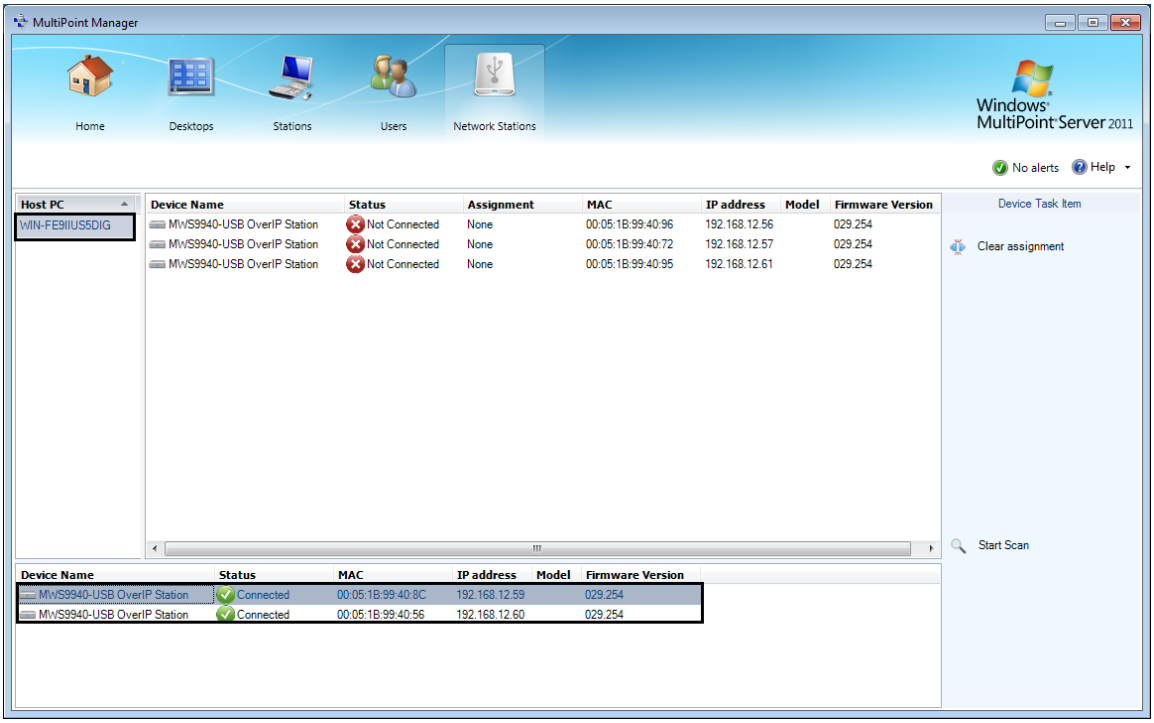


Step 3
The status column on the bottom of the screen shows “Connected” while the assignments for Server ‘A’ completed.



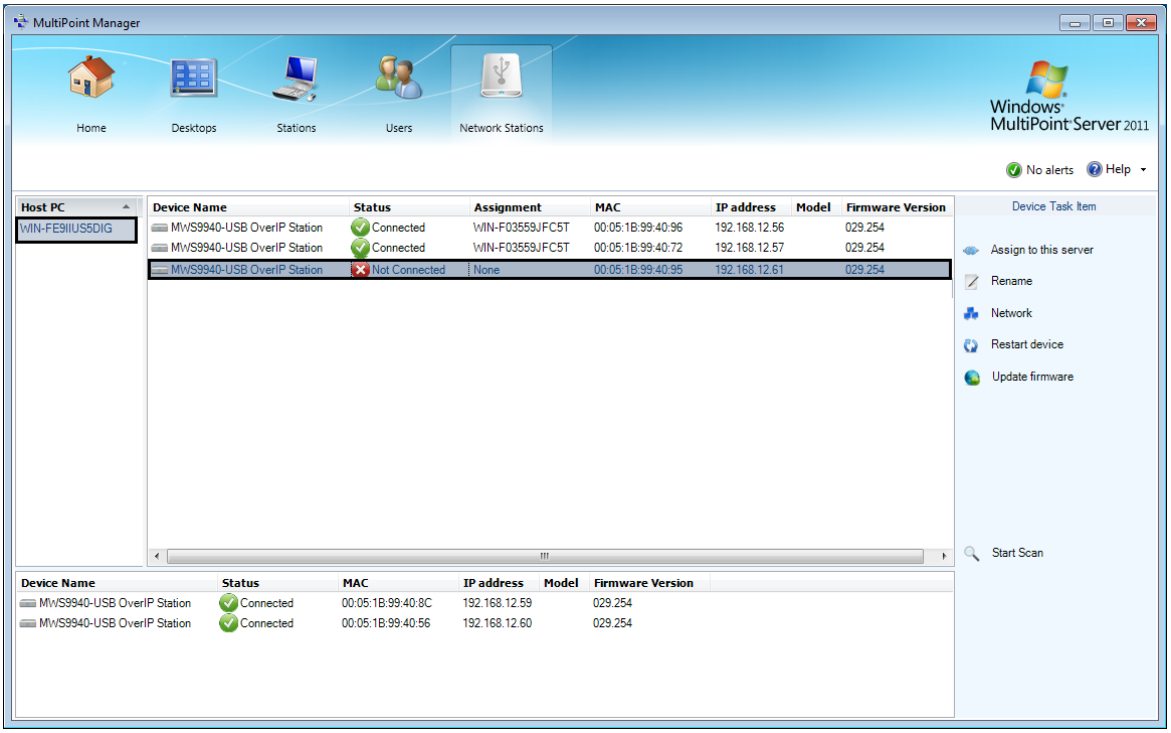
Step 4

Select and match for the stations one by one as assigned and pasted on the Server B Column of the table 1 in step 1. Then left click “Assign to this server ”under“ Device Task Item” to complete assignment.



NOTE:

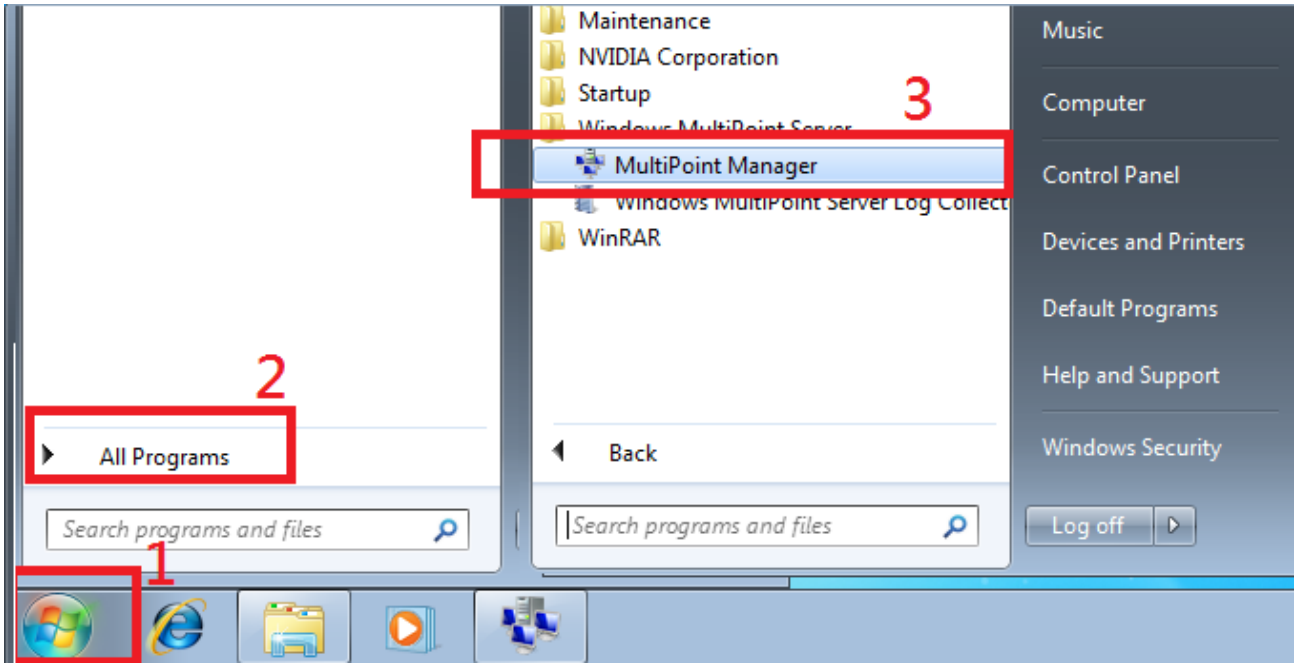
The host PC will show the 2-assigned workstation of server ‘B’ at lower part of the screen while the other 2 assigned station of ‘A’ server is showed on the mid of screen, meantime there is one ‘free station’ waiting to be assign for any other server.



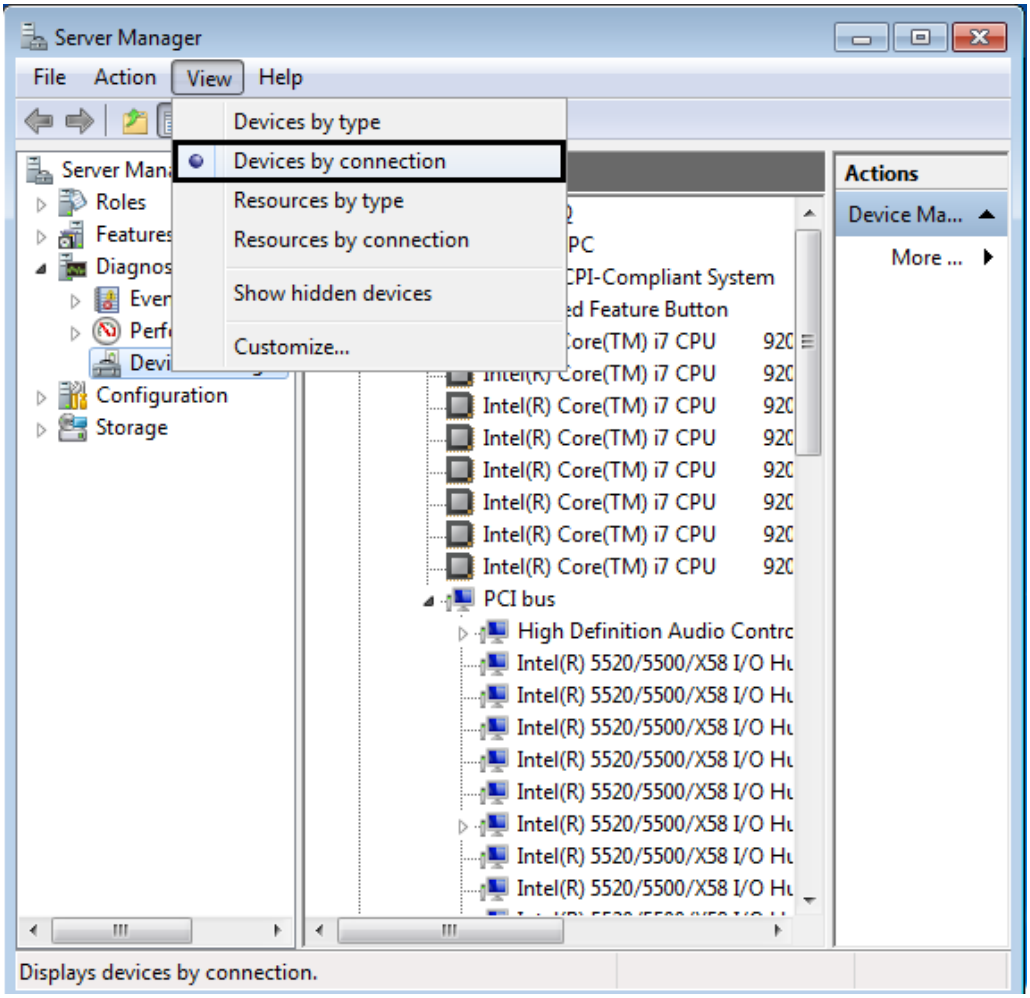
VERIFYING THE MWS9940 CONNECTION

Step 1

Please follow up the illustration below: 1. Start -> 2. All Programs -> 3. MultiPoint Manager(under Windows MultiPoint Server folder)

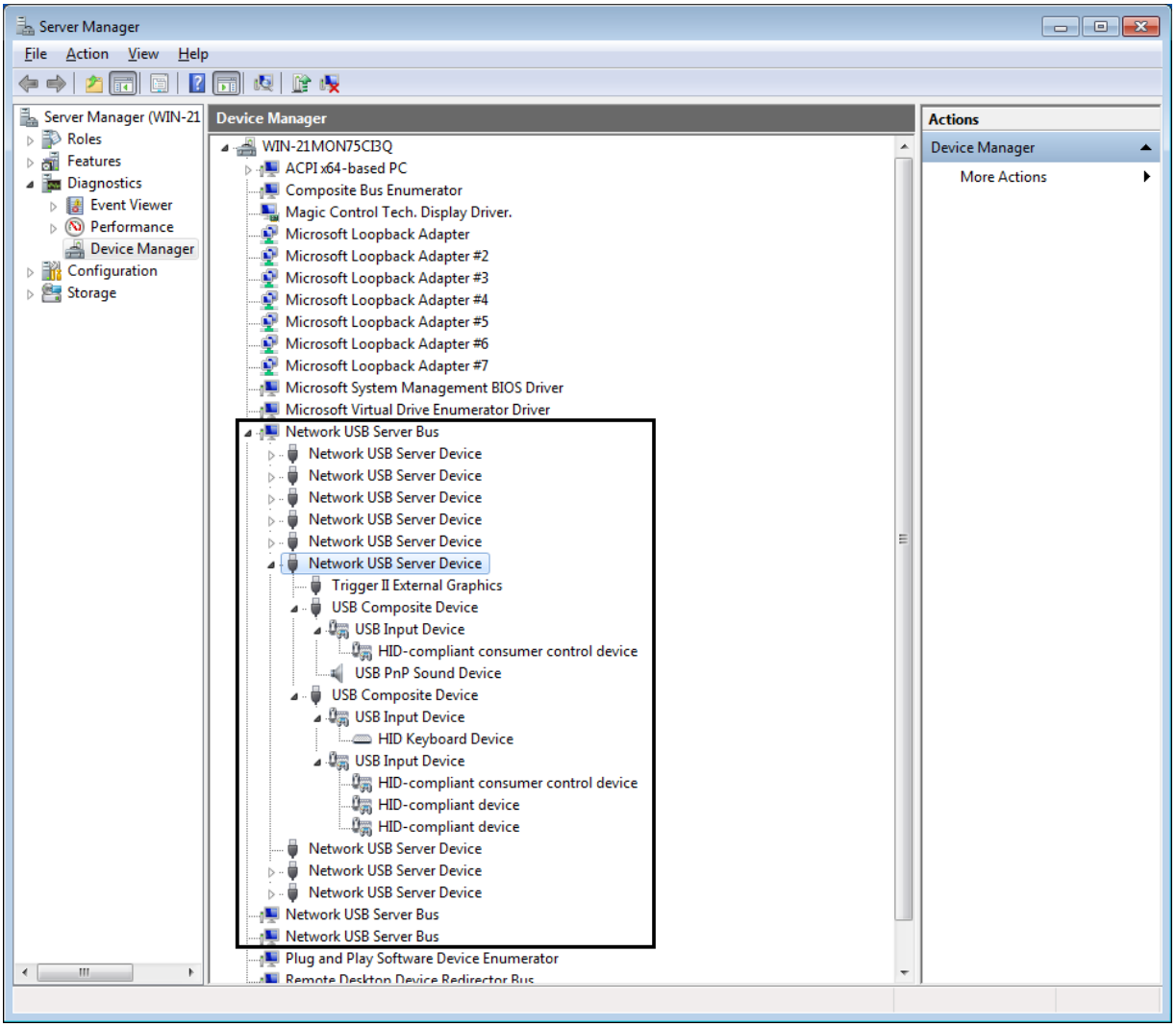


Step 2
Click “Device Manager” then select “Devices by connection” as the picture



Step 3

Extend “Network USB Server Bus” trees for all the input and output devices as the picture for verification whether all of the devices have been successfully connected.

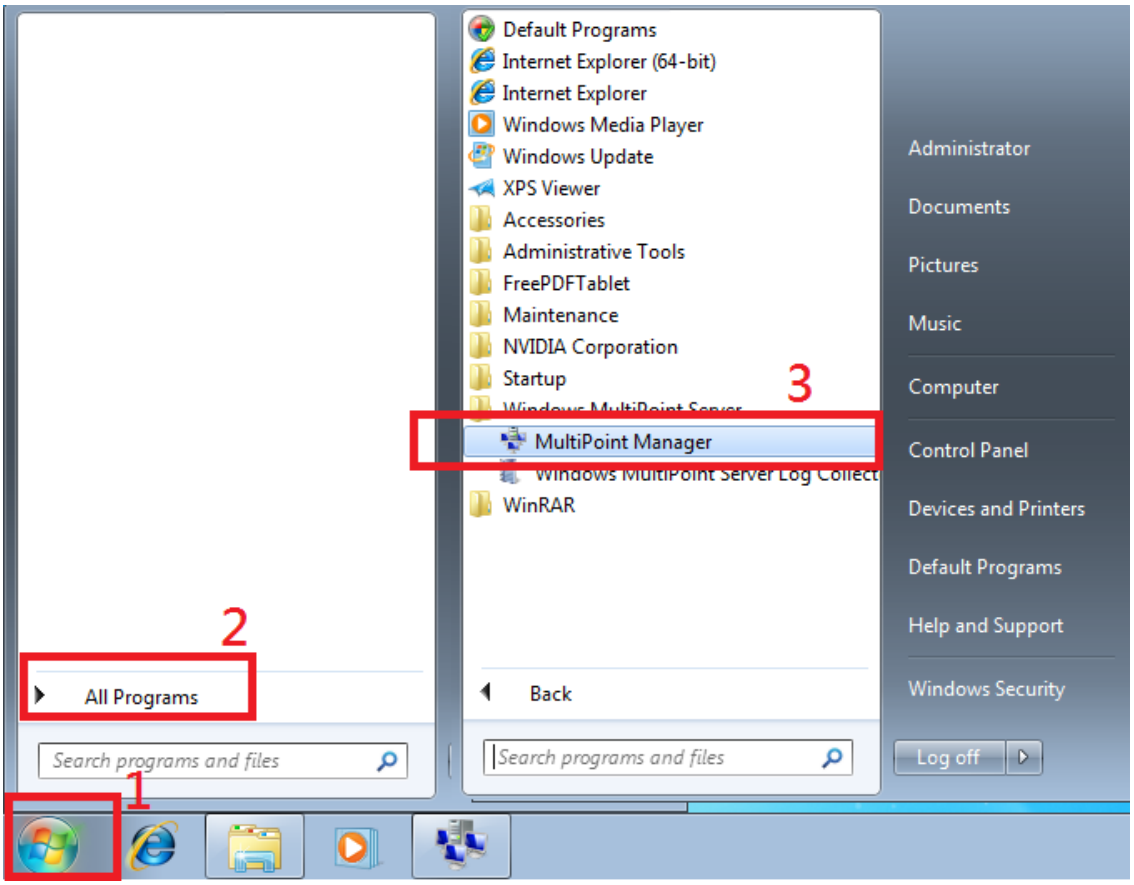


ADJUSTING THE SCREEN RESOLUTION

By default, Windows MultiPoint Server 2011 will select the recommended resolution for each connected display. However, if you would like to choose a different resolution, follow these steps:

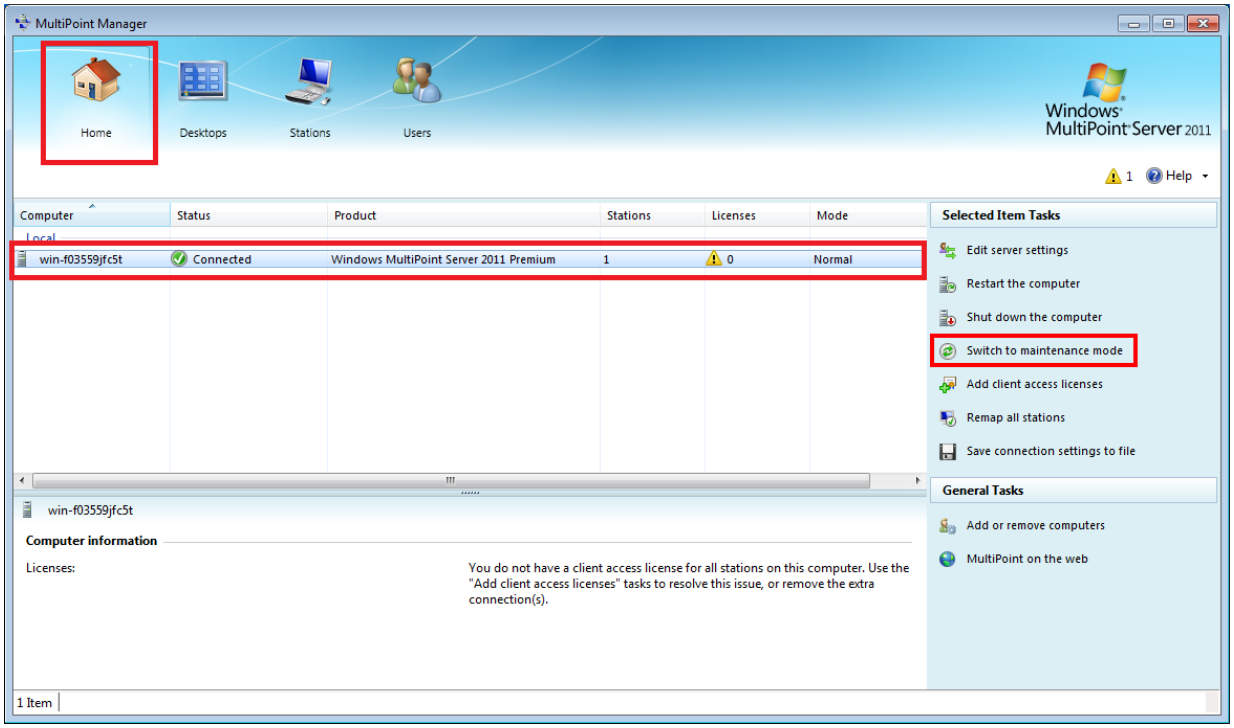
Step 1

Please follow up the procedure on illustration for getting into “MultiPoint Manager” as 1. Start -> 2. All Programs -> 3. Windows Multipoint Server -->□MultiPoint Manager



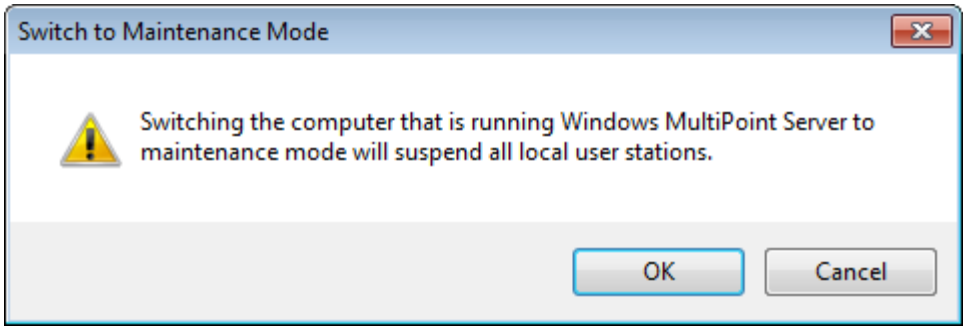
Step 2:

Go to MultiPoint Manager => Home =>Local Station => switch to maintenance mode



Step 3:

Click OK to continue

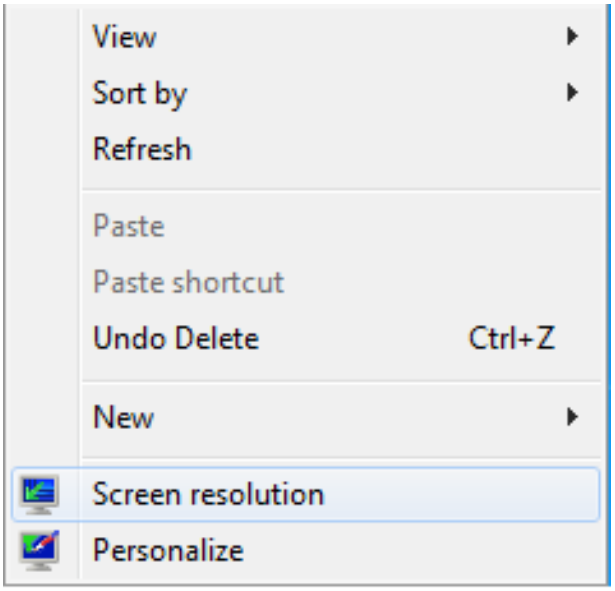

Switch to Maintenance Mode
Switching the computer that is running Windows MultiPoint Server to maintenance mode will suspend all local user stations.
OK
Cancel

Step 4

Press “Ctrl + Alt + Delete” to log in administrator into **Maintenance Mode**

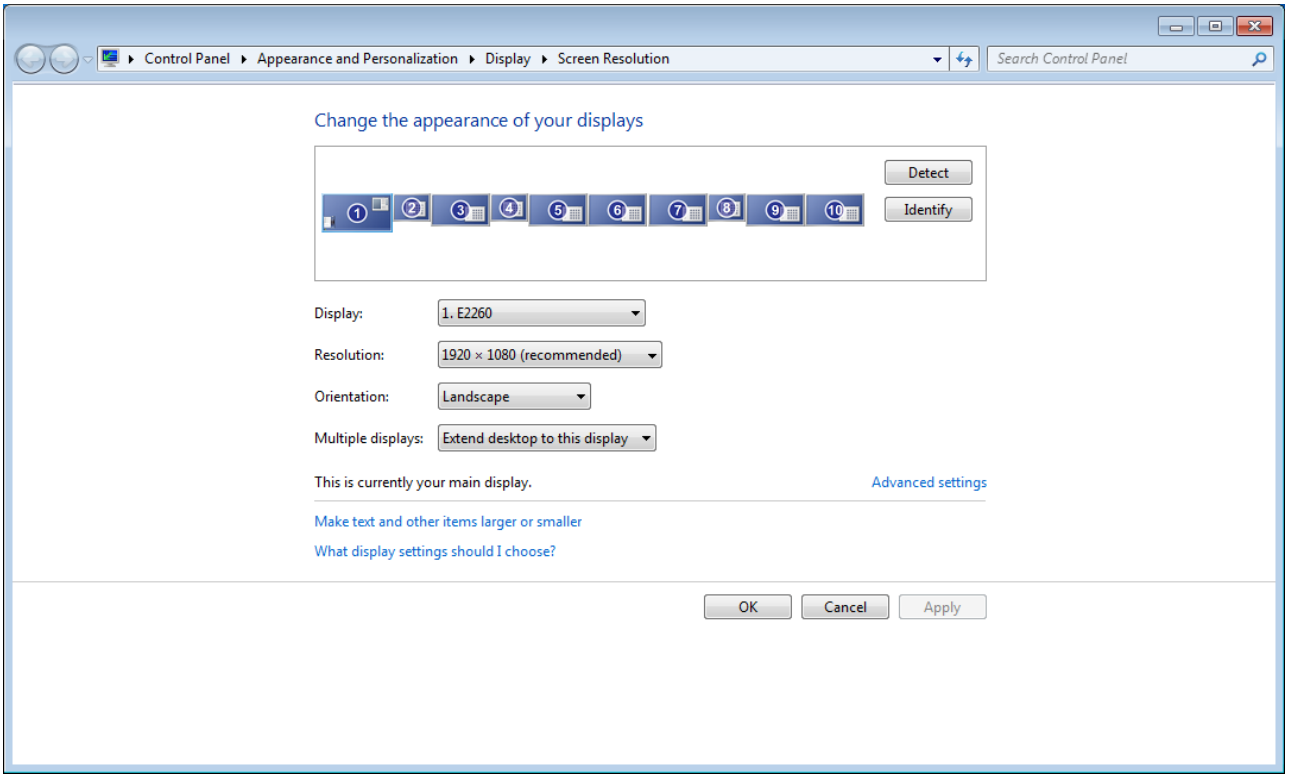
Step 5

Right click on the desktop and choose **Screen Resolution** from the contextual menu.



Step 6

Click Identify to **identify** each display. Then click on the display to be adjusted and choose the desired resolution from the **Resolution** dropdown menu. (suggest: better using the system recommend resolution)

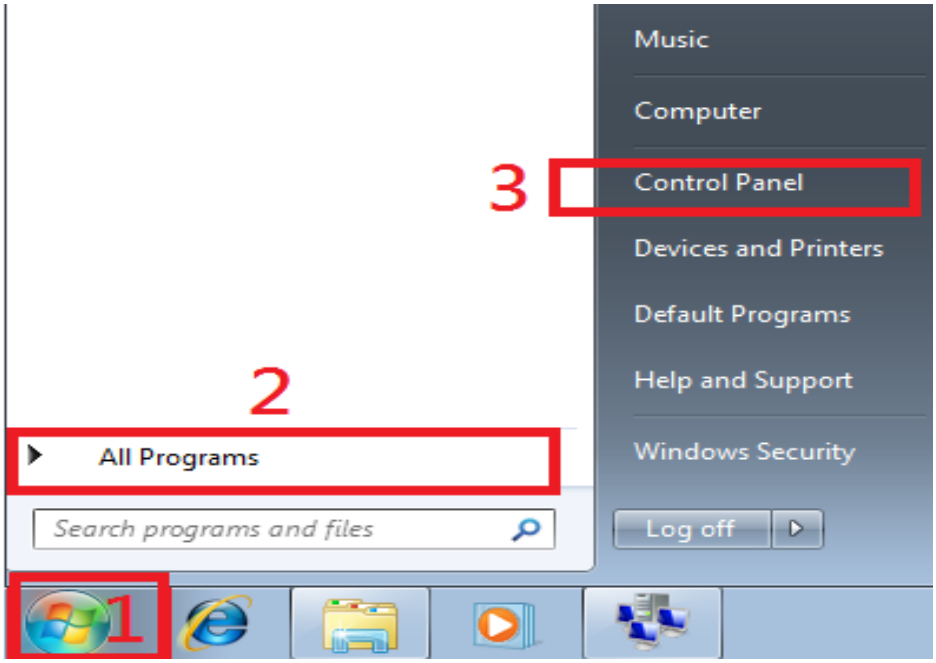

Control Panel ▸ Appearance and Personalization ▸ Display ▸ Screen Resolution
Search Control Panel
Change the appearance of your displays
Detect
Identify
Display: 1. E2260
Resolution: 1920 × 1080 (recommended)
Orientation: Landscape
Multiple displays: Extend desktop to this display
This is currently your main display.
Advanced settings
Make text and other items larger or smaller
What display settings should I choose?
OK
Cancel
Apply

DEVICE DRIVER UN-INSTALLATION

The following procedure allows you to uninstall the MWS9940 device driver. Please make sure all MWS9940 are Clear assignment from your (Network Stations) before executing the device driver uninstallation program.

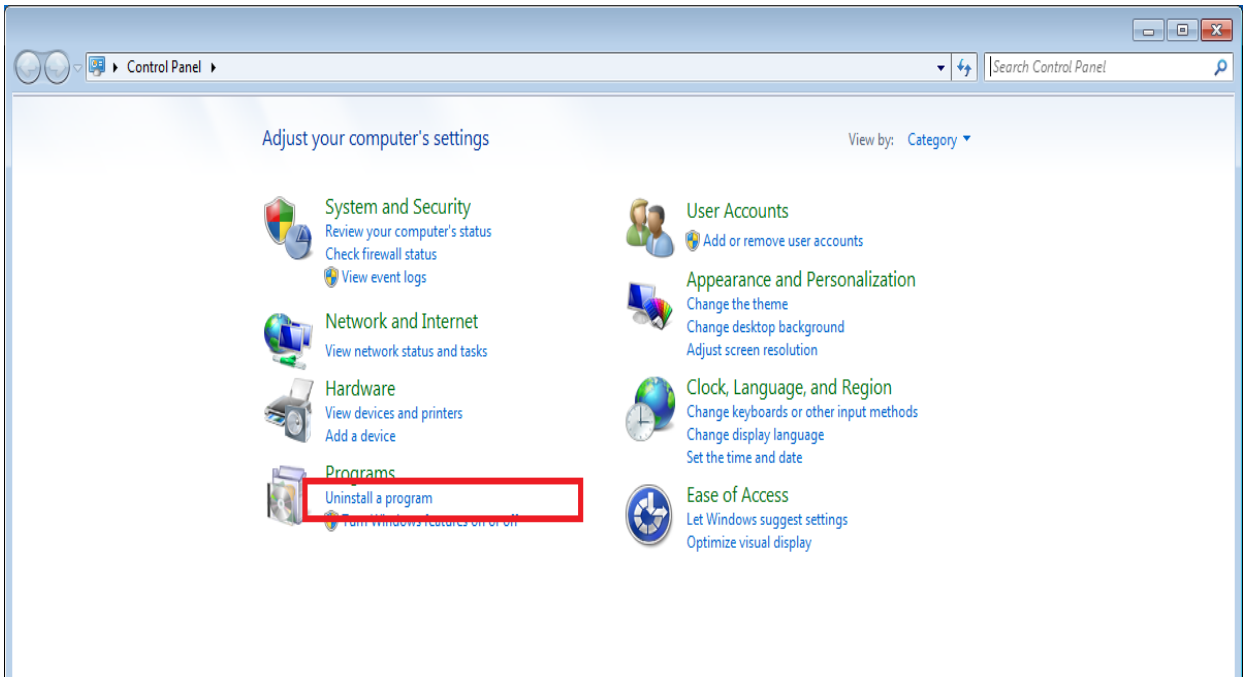
Step 1

1. Click Start -> 2. All Programs -> 3. Control Panel



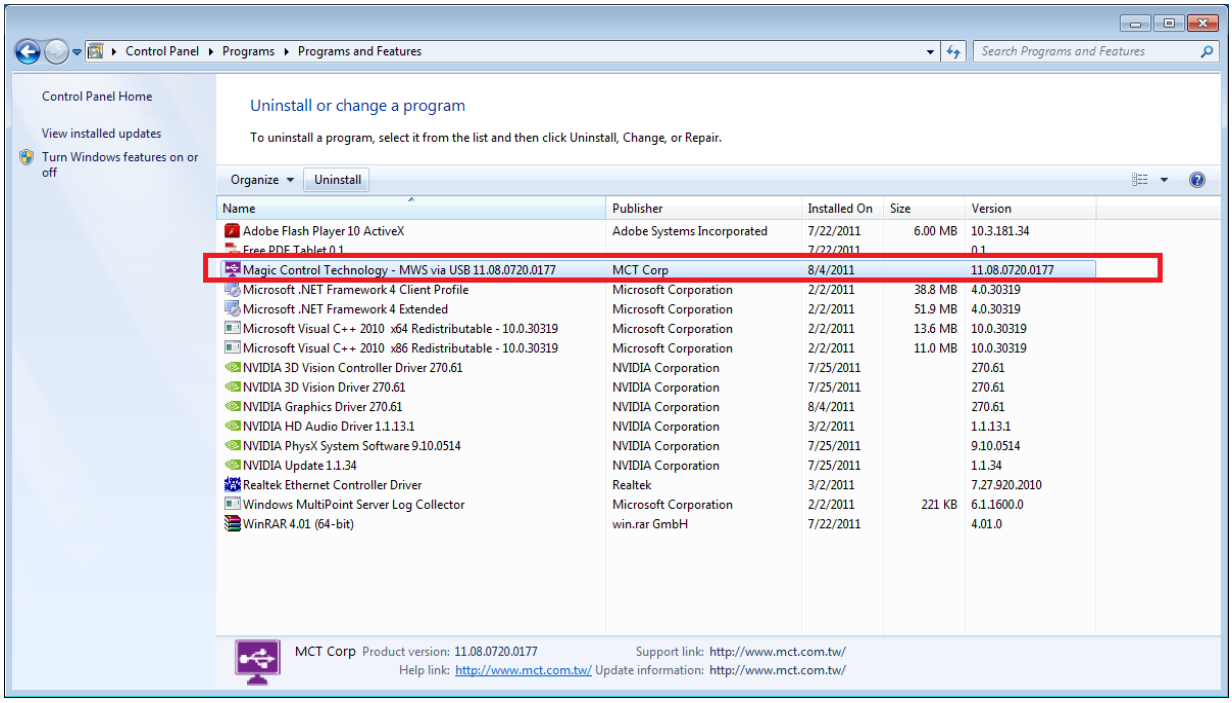
Step 2

Double click “Uninstall a program” as illustrated on the screen.



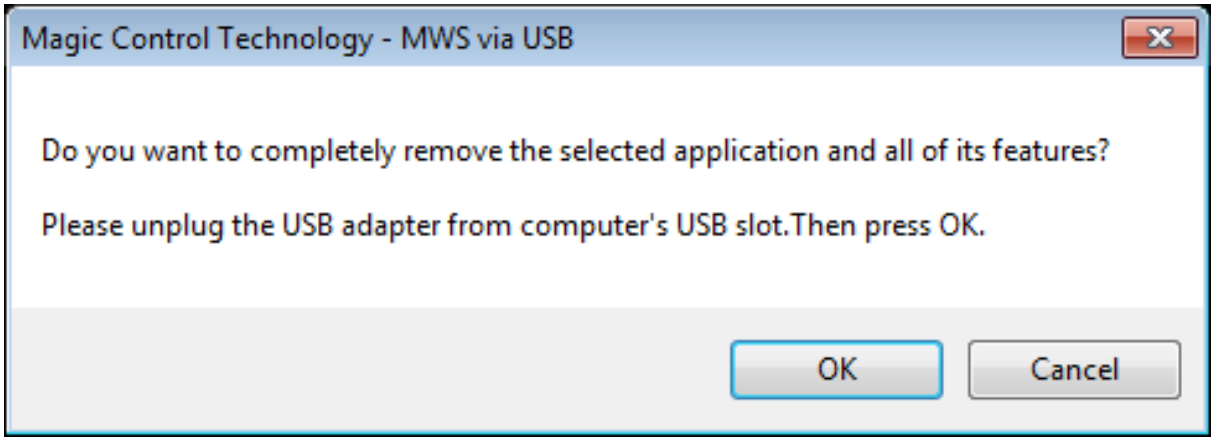
Step 3

Select the “Magic Control Technology – MWS xx.xx.xxxx.xxxx” item. Click Uninstall button.



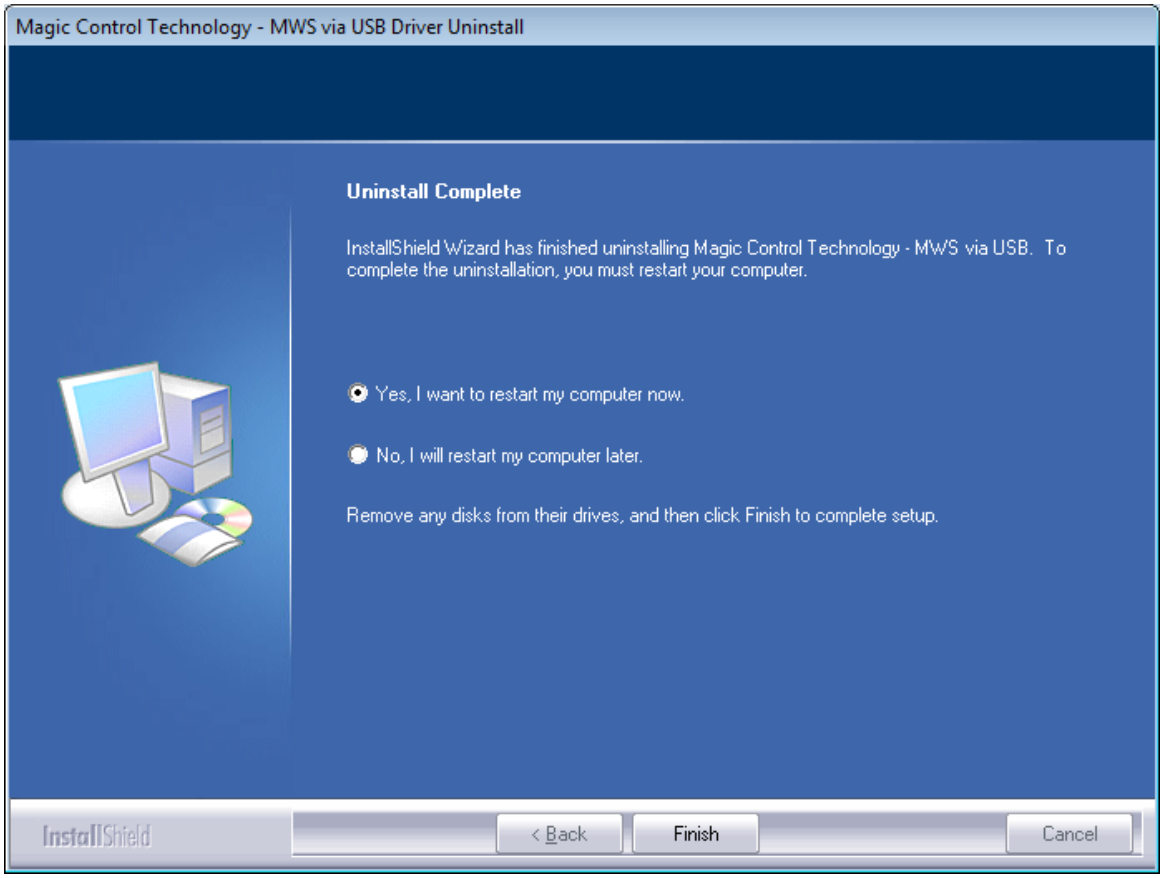
Step 4

Click “OK” to continue


Magic Control Technology - MWS via USB
Do you want to completely remove the selected application and all of its features?
Please unplug the USB adapter from computer's USB slot.Then press OK.
OK
Cancel

Step 5

Select “Yes, I want to restart my computer now**”** and click “Finish**”** to reboot. The driver is now uninstalled.


Magic Control Technology - MWS via USB Driver Uninstall
Uninstall Complete
InstallShield Wizard has finished uninstalling Magic Control Technology - MWS via USB. To complete the uninstallation, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
InstallShield
< Back
Finish
Cancel

SPECIFICATIONS

MWS9940 Specification			
Server OS Support	Window MultiPoint Server 2011		
Host connecting Interface	Host Server 1000 Giga bit LAN		
I/O Ports	2 x USB 2.0 Ports for keyboard and Mouse 2 x Stereo Audio Output (Speaker/Headphone) and Mono audio input (Mic) 1 x VGA-type video oupout (DB-15) 1 x Gigabit Ethernet Power jack		
Optimatizing Video Resolution	Monitor	Wide Screen	Standard screen
	17"	1360 x 768	1024 x 768
	19"	1360 x 768	1280 x 1024
	20"	1600 x 900	N/A
Mounting Kit	Support 100 x 100mm VESA HOLES ON MONITOR		
Power Supply	Input: 110~240 VAC / 5V ; Output: 3A		
Power LED	Green LED indicates power on		
Case Material	ABS		
Product Weight	Without mounting kit: Approx. 122.5g		
Working Current	≦ 500mA (Self-Power)		
Operating Temperature	0 to 40°C		
Operating humidity (Rh)	10% ~95%		
Regulatory compliances	FCC, CE, C-tick, VCCI		
Warranty	Eighteen months limited hardware warranty		

REGULATORY COMPLIANCE

FCC

This equipment has been tested and found to comply with Part 15 of the FCC rules. Operation is subject to the following two conditions:

• This device may not cause harmful interference

• This device must accept any interference received, including interference that may cause undesired operation.

CE

This equipment is in compliance with the requirements of the following regulations:
EN 55022: CLASS B (2006),
IEC/EN 61000-3-2 (2006), IEC/EN 61000-3-3 (1995+A1:2001+A2:2005)
EN 55024 (1998+A1 :2001+A2 :2003), (IEC/EN 61000-4-2 (1995+A1:1998+A2:2001)
/-3 (2006)/-4 (2004)/-5 (2006)/-6 (1996+A1:2001)/-11 (2004))

C-Tick

This equipment is in compliance with the requirements of the following regulations:
EN 55022: CLASS B (2006), AS/NZS CISPR22 © IEC: 2005.

VCCI

This equipment is in compliance with the requirements of the following regulations:
CISPR 22 © IEC: 2005.

WEEE Information

For EU-member states:
The use of the symbol indicates that this product may not be treated as household waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For the information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

KNOW FACTORS & NOTE

SCHOOL ENVIRONMENTAL AND BEHAVIOR MATRIX

MWS means to simplify operation and provide safety environment in the class room!
Teacher turn on computer first thing when the day begin, one button that turns on all station power simultaneously and continue all day with auto-mapping enables each individuals operation; turn off computer at end of date that shut down all station power as well.
When student walk in the classroom, he/she only needs simply turn on the monitor and log in, then log out the workstation and turn off monitor after class; that leaves power idle thus convenient next class enable fast log on. For safety reason, nobody has to touch any device's power or USB connector to avoid strange behavior that may cause electronic power shock.

1. Disconnecting a Workstation while videos are playing may cause stability issues. Do not disconnect Workstations during video playback.
2. Using different display resolutions on workstations may cause display issues if a station is disconnected. Set all workstations to the same resolution for the best performance.
3. Video play back performance is rely on USB2.0 bandwidth and limited to maximum bandwidth of 480 Mbit/s [60 MB/s] , therefore smaller scale display window at lower resolution is recommend.
4. When all station needs for video playback, smallest scale window is recommended. eg. when all 10 station playing youtube, keep every video frame at original or smallest size. for better performance, upgrade to a higher level CPU and increase memory is recommended.
5. Multi-Video Playback at each workstation is not recommended, it occupied CPU's loading and lower each task performance, it could cause operation freeze when CPU consumption is over its limited.
6. Prior to installing the MCT driver, the computer should be running the most current build of Windows MultiPoint Server 2011 and have the appropriate graphics card driver from the list showed at "System Requirement" page.
7. Due to Ethernet bandwidth limitation, for smooth playing performance, minimize video playback landscape is recommended when multiple videos playing across many monitors simultaneously, scale are recommended as below:
   - 2 users: full screen
   - 4 users: 1/3 landscape
   - 6 users: 1/4 landscape
   - 8~10 users: 1/8 landscape
8. MWS9940 is default for 10 stations at the moment, excess station is to be requested. Driver installation may take 2 to 3 minutes. Initial mapping may take 5 minutes for 10 stations after driver installed. Regular rebooting may take 3 to 4 minutes to get auto mapping on all stations.

TROUBLESHOOTING TIPS

The following troubleshooting tips may help if you are experiencing any difficulties using our device.

• Check to see that the monitor is connected correctly and the power is ON.
• Make sure to restart the server after the driver installation.
• When disconnect the power adapter or Ethernet cable, wait for a few seconds for re-connecting it.
• Check the website to make sure you have the latest drivers.
• Reset/refresh/resynchronize your monitor if the screen is not in proper (center).
•Full screen video display is not recommended; use Intel Sandy Bridge chipset may help with better performance.

DRIVER RELESE NOTED

For immediate support, visit MCT's website: http://www.mct.com.tw to find the update driver, Knowledge Base articles, and software for your device. You can also chat live with a support technician or submit a trouble ticket.

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